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PAPER TRADE JOURNAL

FEBRUARY 17, 1944

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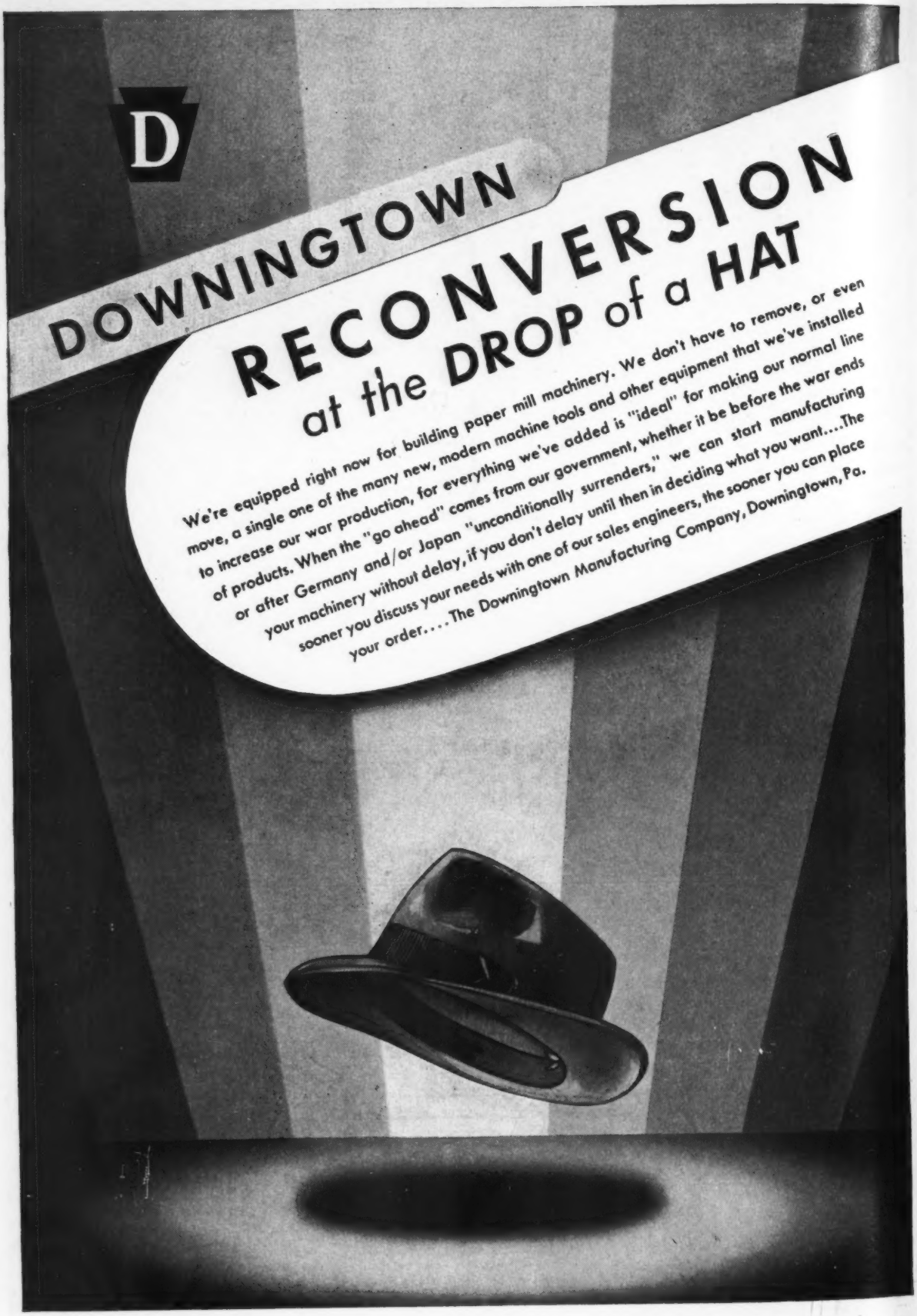
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COLOR..

TIDE WATER LUBRICANIA

DEFINITION: For practical purposes, the color of an oil is expressed as a "number" which is determined by matching the light transmitted through a pre-determined depth of oil with that same light transmitted through numbered and standardized glasses or disks.

EXPLANATION OF TESTS USED: The American Society for Testing Materials have selected two instruments for determining the color of petroleum products. These instruments are:

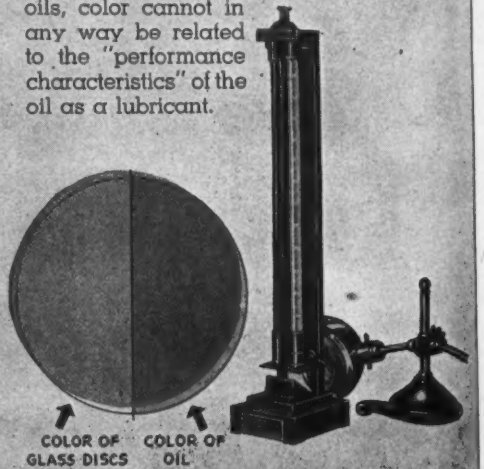
(1) **The Saybolt Chromometer** for making color determinations on the lighter oils.
(2) **The Union Colorimeter** for determining color on the "pale-straw" and darker products.

THE SAYBOLT CHROMOMETER consists of two vertical glass tubes. One of these tubes is of plain glass, open at both ends with provision for holding one or two colored glasses or disks at the lower end. The other tube is closed at the lower end with a colorless plate and is provided with a drain cock. This tube is graduated. A mirror reflects light through the oil and the tubes into an optical prism-eye piece for matching the light passing through the oil with the light passing through the disks. The color scale for light oils varies from minus 16 to plus 30.

THE UNION COLORIMETER: In the Union Colorimeter the N. P. A. or A. S. T. M. color of the oil is obtained by matching one of a series of fixed color standards against a sample of oil. The comparison is observed through a circular aperture at the end of a long rectangular box. The color standards are mounted at one end of the box in a vertical magazine which may be moved up and down by means of a knurled hand knob operating a ratchet and gear.

The method used for matching colors on both the Saybolt Chromometer and the Union Colorimeter follow a carefully prescribed procedure outlined under A. S. T. M. Designations D156-38 and D155-39T respectively.

SIGNIFICANCE: Color is of importance in the case of certain light petroleum fractions, particularly products used in dry cleaning or in the textile industry, where the use of colored products might discolor the fabric being treated. The chief significance of color as applied to the darker oils is in the fact that it is a generally accepted index of the uniformity of a given grade or brand. In these oils, color cannot in any way be related to the "performance characteristics" of the oil as a lubricant.



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Vol. 118, No. 7 Thursday, February 17, 1944 Price One Dollar

Paper Output in 1943 Was 17,035,000 Tons

Paper Production Is Estimated 7 Percent Lower Than In 1942 But Paper Board Showed Good Increase—Writing Paper Production of 805,000 Tons Was 6 Percent Lower Than All-Time Record In 1942.

By M. C. Dobrow, Executive Sec., Writing Paper Mfrs. Association

Production in 1943 for the industry as a whole was considerably greater than had been forecast earlier in the year based on the dwindling supply of pulp and wood. Paper and paperboard production achieved a surprisingly high volume in 1943. Total output is estimated at 17,035,000 tons. This is only 4% lower than the all-time record in 1941. The detailed figures need to be examined carefully because the trends for paper and paper board were not the same. In 1943 the production of paper board increased about 800,000 tons over the 1942 production, whereas the production of all grades of paper declined almost 700,000 tons.

It should be stated at the outset that the Census Bureau, at the request of the War Production Board, has included in the revised figures of 1941 and 1942 some 400,000 tons of building paper and paper board, the product of 24 mills not previously classified as producers of paper and paper board. Allowance for this production not heretofore included in these figures is also made in the 1943 estimates.

Happenings During the Year

What actually happened during the year that made this tremendous production possible in view of the shortage of pulp and dwindling supply of wood?

1. Some 450,000 tons of wood pulp from inventory were used up during 1943.

2. Less pulp was exported under Lend-Lease and Good Neighbor Policy than was originally requested; also, imports were slightly higher than in the previous year. These two factors contributed approximately 150,000 tons to the consumption of pulp.

3. About 500,000 cords of wood inventory were used up by paper mills during 1943.

4. Greater use of waste paper than actual receipts resulted in reducing inventories by some 300,000 tons.

5. Further depletion of inventories of other fibrous materials and greater use of non-fibrous materials.

These five factors made it possible to produce about 1,300,000 tons more than could have been made from the new production of raw materials. During 1943 inventories of pulp (and this refers to all inventories—at pulp producing points, pulp consuming points, as well as pulp in transit) declined to a point equal to about 15 days' consumption. Obviously, this is below a practical working minimum and no further depletion in pulp inventories is practical. The present

UNITED STATES CAPACITY AND PRODUCTION BY GRADES

Grade	1940 Capacity	1940 Actual Production	1940 %	1941 Capacity	1941 Actual Production	1941 %	1942 Capacity	1942 Actual Production	1942 %	1943 (Estimated) Capacity	1943 (Estimated) Actual Production	1943 (Estimated) %
Writing Paper	728,190	599,452	82	750,000	738,434	98	880,000	853,468	97	860,000	805,000	94
Other Fine Papers	165,720	136,301	82	224,800	211,580	94	200,000	190,007	95	200,000	189,000	94
Book Paper (Uncoated)	1,959,820	1,655,423	84	2,045,000	2,025,891	99	1,885,000	1,716,029	91	1,850,000	1,620,000	88
Groundwood Printing and Specialty Papers	617,830	550,453	89	660,000	642,676	97	675,000	610,168	90	660,000	582,000	90
Newsprint Paper	1,075,080	1,056,304	98	1,080,000	1,043,999	97	985,000	967,211	98	900,000	811,000	90
Tissue Paper	809,290	733,894	91	920,000	912,874	99	1,000,000	981,996	98	1,000,000	970,000	97
Wrapping Paper	2,840,220	2,500,818	88	2,955,000	2,778,441	94	3,085,000	2,713,738	88	3,050,000	2,501,000	81
Building Paper	958,210	682,460*	71	1,175,000	917,912	78	1,200,000	1,001,383	83	1,100,000	877,000	80
All Other Papers	267,840	189,530	71	112,200	90,598	81	110,000	80,678	73	110,000	89,000	81
Total Paper	9,422,200	8,104,635	86	9,922,000	9,362,405	94	10,020,000	9,114,678	91	9,730,000	8,444,000	87
Paperboard	7,468,770	6,379,074*	85	8,570,000	8,399,960	98	8,735,000	7,773,968	89	9,100,000	8,591,000	94
Total Paper and Paperboard	16,890,970	14,483,709	86	18,492,000	17,762,365	96	18,755,000	16,888,646	90	18,830,000	17,035,000	90

* Not strictly comparable with figures for succeeding years, as the product of 24 mills not previously considered as paper or paperboard has been included in these classifications in 1941-2-3. The tonnage is approximately 400,000 tons per annum.

depleted inventories make for intermittent operations where buyers of pulp do not receive their supplies on the exact dates scheduled because of transportation delays.

Cannot Maintain Production

The situation as regards pulpwood is regarded by many to be as serious as the depleted position of pulp inventories, and there is a belief in some quarters that production of paper and paper board cannot be maintained at anything like the recent level. There is fear that pulpwood inventories will be depleted in the same manner as pulp, and that this would result in a general breakdown of production in certain important segments of the industry. However, such a situation cannot be contemplated as the requirements for paper and paper board by the armed forces and essential civilian industries catering to the armed forces must be and will be supplied with the necessary paper and board to carry on.

While the pulpwood situation is still critical, there is some hope for improvement. With the situation as stringent as it was in the last six months of 1943, any addition of new receipts or consumption which results in *no further* decline in inventory must be considered as an improvement in the situation. Actually, in the last six months of 1943 there was an increase in wood inventories. The situation improved more than had been anticipated.

Wood Inventories at Pulp and Paper Mills:	Cords
January 1, 1941	3,930,000
July 1, 1941	3,642,000
January 1, 1942	3,717,000
July 1, 1942	3,443,000
January 1, 1943	3,378,000
July 1, 1943	2,308,000
January 1, 1944	2,899,000

Gains Not Uniform

Unfortunately, the recent gain in wood inventories was not uniform. The northeastern region suffered a decline in inventory in the last quarter, and mills in the Lake States area just about held their own. Also, the cutting from which mill receipts will come in the next few months is down in some sections from what it was a year ago.

On the other hand, we have these factors:

1. Various publicity campaigns are resulting in more cutting of farmer wood.

2. There is more capacity to use rough wood than was formerly the case.

3. In nearly all of the regions it appears that the labor supply is at least stabilized. No more men are being lost and the next turn should be upward.

4. Sometime in 1944 the manpower situation should turn around; many more men will be available for the woods.

5. One of the weaknesses in the picture in all localities is transportation. However, when the paper industry really comes up against lack of transportation, relief will be afforded, particularly in the South. As long as the armed forces need paper board production to the extent that they do now, they will not see the cutting of pulpwood eliminated for the want of trucks.

6. Another cause for concern is the possible reduction of pulpwood imports from Canada. The current international agreement calls for 1,250,000 cords in 1944, as against 1,550,000 cords for last year. More recent arrangements may raise the volume of wood imports originally scheduled.

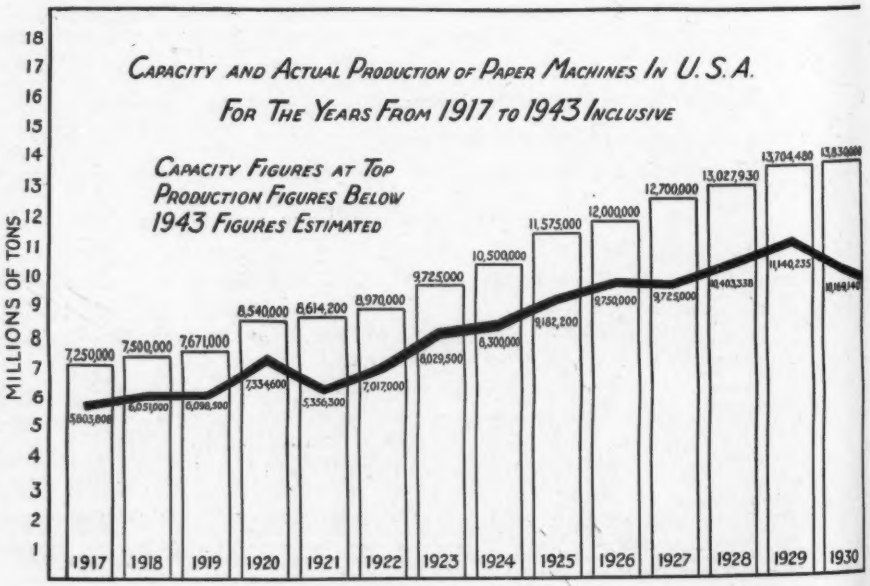
It would seem from the above that even if inventories of wood now go back to where they were last July, the industry is not going to get into serious trouble unless the war in Europe should go beyond next fall.

All of this is based on the assumption that the energetic campaign to cut wood by many individual companies continues unabated. Strenuous efforts and much publicity in the United States and Canada have produced a greater amount of pulpwood than appeared probable in the middle of 1943. These efforts are being maintained and should yield further results.

As the new year begins it is evident that the demands for paper board are greater than ever before. It is not hard to understand this increased demand in view of the greatly increased physical production of goods in the United States, both war and civilian. Also, about two-thirds of the paper board production is rated as going for direct and indirect military purposes. The ability to maintain the present high level of paper board production and to achieve further increases is largely contingent on the maintenance of cutting of pulpwood in the South.

Increased Collections of Waste Paper

Another factor of great importance in the production of not only paper board, but many grades of paper, is increased collections of all types of waste paper. The Waste Paper Campaign is being splendidly carried out. The appeal to the public throughout the newspapers of the country appears to be



second only to the War Bond Campaign. Important gains have already been made in collection of this material, but further gains are necessary to maintain all mills in operation.

In the paper industry, which is largely centered in the northern area (except kraft paper), the difficulties of production for 1944 are far more severe. All of the northern regions are dependent to some extent on imported pulpwood from Canada. The Northeast is also normally dependent to some extent on importations of Canadian labor to cut domestic wood. The shortage of manpower for cutting wood in both the United States and Canada is well known. The Combined Production and Resources Board estimated that 18,500 men in the United States working an average of 225 days each, and 20,000 men in Canada working an average of 100 days a year, are required to maintain the 1943 rate of pulpwood consumption.

It is not likely that important gains in the number of men working in cutting pulpwood will be made until after the Allied armies have invaded Europe across the Channel and that invasion has been successful. Therefore, until the war necessities permit the release of manpower to the pulpwood industry, we are likely to see some decline in production of paper.

On the other hand, the war requirements for paper as well as paper board continue high. The Requirements Committee of the War Production Board in allocating pulp for the first quarter of 1944 recommended paper and paper board production of 1,398,837 tons per month.

War Uses of Writing Paper

Writing paper production in 1943 was 805,000 tons, as compared with 853,463 tons in 1942 which was the record for all time. Shipments to market in 1943 were in excess of the year's production, and resulted in depletion of inventories at writing paper mills to the lowest point since 1920. Increased number of business transactions and greatly expanded requirements for record keeping have been the basis for large consumption of writing papers in the civilian field.

The country will never get over entirely the tremendous incursions of government into business. All of this has meant, and will continue to mean, more forms, more records and more bookkeeping.

Formerly records were kept by some 200,000 large concerns and by the government for large taxpayers. Other records were of comparatively minor proportions.

Social Security taxes and deductions of taxes at the source now entail new detailed records required to be kept in terms of 45 to 50 million individuals.

The war demands for writing paper have continued high. For the year as a whole, shipments of rag content papers direct to the U. S. Government and its agencies were 53% of the total production of these grades as against 50% in 1942. In sulphite writing paper grades, which represent a considerably larger tonnage, 21% of 1943 tonnage of these grades was shipped direct to the U. S. Government and its agencies, as compared with 19% the year before.

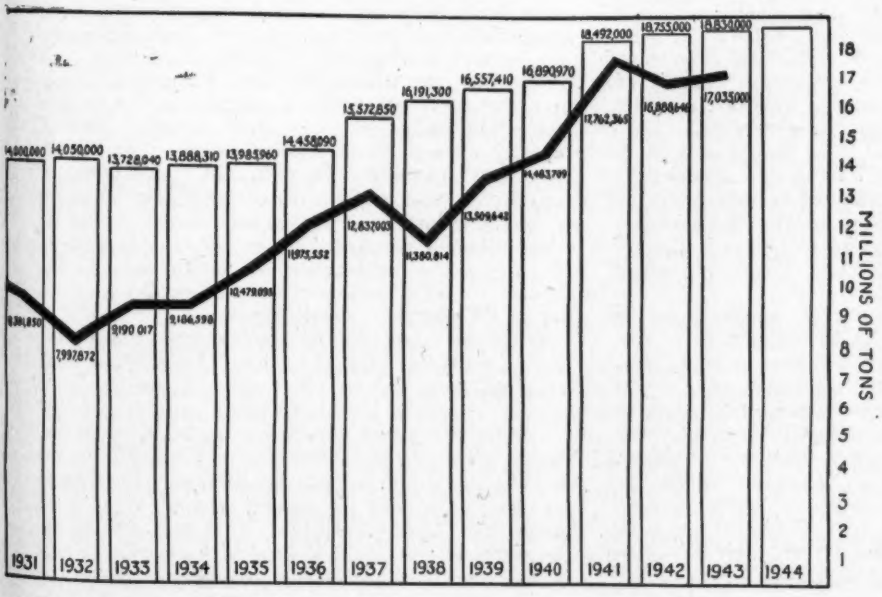
Because of the nature of the commodity and the complexity of gathering such information, the industry has never obtained complete data on the end-use of its products until recently. In the determination of the amount of paper to be made and pulp to be allocated therefore, mills are required by WPB to get such information from their customers and from customers' customers. Results of these compilations seem to indicate that 75% of all fine papers are currently being used by governmental agencies, plants which are producers of defense orders as defined in Priorities Regulation No. 1, and in the essential civilian public services, such as communications, transportation, utilities, health, welfare, etc.

Estimates of the distribution of rag content papers in the first three classifications are as follows:

	%
Direct and Indirect Sales to Government Agencies	50
Direct and Indirect Sales to Defense Plants	23
Civilian Public Services	14
Total	87

For sulphite writing papers, estimates of current distribution based on the foregoing classifications are as follows:

	%
Direct and Indirect Sales to Government Agencies	31
Direct and Indirect Sales to Defense Plants	28
Civilian Public Services	15
Total	74



These figures indicate the importance of writing papers in maintaining the war effort. While writing paper cannot be considered a direct implement of war, this analysis indicates the importance of its use as an operating supply in the war effort. Paper carries the plans for war production. It carries the orders that draft our men and supply them with food, transportation, clothes and equipment. Writing papers carry the military plans and orders with which we shall win this war.

A. D. Whiteside, WPB Vice-Chairman for Civilian Requirements, has made it clear that reasonable amounts of paper as operating supplies for other civilian demands must also be provided. This would include such paper as is used as necessary operating supplies in wholesale and retail establishments, paper used by the public for correspondence with soldiers and otherwise.

Paper in 1944

Now, what about the paper industry for 1944?

The new year over-all will be a year in which businessmen move from one set of problems only to be confronted with the prospects of a new set of problems. The problems of mobilization and war production are largely solved. Sometime in 1944 the problems of demobilization and reconversion will begin to shape up.

One thing is certain. There has been a great depletion in the stocks of all kinds of goods throughout the world. The pulp and paper industry is one in which important shortages have taken place both here and abroad. There are great needs to be filled. They can be filled only by a return to a very high level of production of all types of goods.

In the paper industry, despite its many difficulties, 1943 was a great year. 1944 will be a tough year by comparison. The industry is faced with:

1. Raw material shortage.
2. Labor shortage.
3. Possibilities of lost time.
4. Higher costs.
5. Declining margins.

Perhaps the outstanding achievement for the writing paper industry in 1943 was the WPB and OPA program which brought about:

1. Reduction of basic weights.
2. Proper differentials for lighter weights.

These programs made possible longer operation on paper machines, better utilization of machine facilities and of men, greater yardage of paper for the consumer at no higher cost for the surface area received, and greater economy in the use of raw materials. Without this program the difficulties for mills and the public would have shown up much sooner.

Conversions and Sales Problems

Conversion and postwar sales problems for this industry are not likely to be too serious. Consumption of paper has remained high. Present declining production is less than current consumption. Inventories at paper mills are depleted. Consumers are now using up parts of their inventories which were accumulated before the lighter weight paper regulations went into effect.

At the present time we have a shortage of wood, a shortage of pulp. There is no shortage of paper, but we are headed for a shortage of paper later in 1944.

Even if the war ends in the fall of this year, it will take two or three years to fill up the depleted gaps in the supply of pulpwood, pulp and paper.

Kraft Paper Production in 1943 Declines 10.9 Per Cent Below Last Year

By Willard J. Dixon, President, Kraft Paper Association

Following four years of steadily increasing production, the kraft paper industry suffered a decline in production in 1943. This decline had been anticipated by a forecast last February that 1943 production would be at least 10% under that of 1942. The actual decline amounted to 10.9%. The 1943 shipments, necessarily geared closely to production because of the low inventory position of the industry, also declined. 1943 shipments were 6.5% under 1942. Since the acceptance of orders had to be geared to production potentialities, the actual total of new orders gave no true indication of the amount of business available to the industry. As the year progressed, these orders were restricted more and more to business directly and indirectly for the war effort. Total new orders were 4.9% less than 1942.

For the most part the members of the industry maintained a policy of accepting business only on a month to month basis, not permitting their unfilled order files to exceed a total of approximately 120,000 tons which represented between three and four weeks' production at capacity. The industry closed the year with less than a week's supply of stocks on hand, the lowest inventory figure in the ten year records of the Kraft Paper Association.

Operations Averaged 75% of Capacity

Although faced with fuel shortages in the spring and manpower and raw material shortages throughout the year, the kraft paper manufacturers were able to maintain a relatively constant rate of production throughout 1943, approximately equal to the levels established in the last half of 1942. With the exception of such holiday weeks as those containing New Year's Day, the 4th of July, Labor Day and Christmas, the curve of weekly production was relatively level. The industry's operations averaged 75% of capacity throughout the twelve months with weekly operations fluctuating between 67% and 83% of capacity. Considering the increasing difficulties under which the industry operated in each successive month, which difficulties included a considerable conscription of its pulp for Lend-Lease and the Board industry, the lack of any downward trend in overall operations during the year was remarkable.

There were, however, sharp changes in the relative positions of the grades produced by the industry. Kraft paper is broadly classified into three major types or grades of paper: wrapping paper, bag paper and other converting paper. Bag paper is by far the largest of these three classifications. Its production in 1943 showed a decline of 12% from 1942, comparing closely with the overall decline of 11% in production for the industry as a whole. Wrapping paper which is normally the industry's second largest classification ended 1943 in third place as a result of

a 31% decline in its production during the year. The remaining classification, consisting of all the other grades of converting paper, became the industry's second largest group of papers as a result of an increase of 21% in production in 1943 over 1942.

War Reduces Output of Wrapping Paper

All of these changes within the industry are directly attributable to the war. They reflect the channeling of the smaller supply of pulp into those grades of kraft paper considered essential for war purposes. The increased production of other converting paper, concentrated primarily in such grades as asphalting, gumming, envelope, twisting, spinning, impregnating and saturating papers, was for conversion into war products. This necessitated a sharp reduction in the manufacture of wrapping paper with the manufacturers compelled by necessity to restrict their limited shipments of this grade primarily to the armed services and those industries supplying them. As a result, the amounts of these various grades of paper, available for civilian use, were sharply reduced.

The war also caused a sharp shift among tonnages within the bag paper classification. This large classification contains multiwall sack paper as well as the many types of bag papers used in the manufacture of grocers bags, variety bags, miscellaneous bags and standard sacks. The production of multiwall sack paper was increasing during 1943 while grocers and variety bag papers were placed indirectly under a limitation order by the WPB through a limitation on the tonnage of grocers and variety bags which could be made.

By these various shifts of grades, the industry proved able to adapt itself to the constantly changing requirements of the war agencies although operating at a depressed level of production. In this respect, the industry maintained a good record of cooperation with the government, meeting crisis after crisis by delivering the needed grades of paper on schedule in the quantities required. Unfortunately, this could be accomplished only by limiting the supply of papers for civilian use, by WPB order or otherwise.

Prices Established By OPA

Throughout 1943 the prices on all grades of kraft paper were regulated by the Office of Price Administration through MPR No. 129 and MPR No. 182. The five dollar roll-back which became effective in July 1942 remained in effect upon all papers under MPR No. 182 until April 1, 1943, at which time the OPA rescinded the roll-back. There have been no other changes in kraft paper prices since that time. The average value per ton of shipments in the industry for 1943 was almost identical with that of 1942, there being an actual one-tenth of one percent decline in average per ton return to the mills in 1943 compared with 1942.

Any forecast for 1944 must depend upon how soon Germany is willing to concede its defeat. It is believed that most of the industry's present production difficulties could be quickly remedied following Germany's surrender. With this thought in mind and General Eisenhower's forecast of a German defeat during 1944, it is possible to look upon this year's production prospects with some optimism. As conditions now exist, the self-contained mills in the industry are operating on a hand-to-mouth wood supply and the converter mills are depending for their operations upon the day-to-day freight arrivals of pulp as allocated by the Pulp Allocation Committee. Improved wood conditions and the resulting increase in the flow of pulp to the paper mills will probably not occur prior to the second quarter of the year. However, any such improvement taking place in the south, where the largest proportion of kraft pulp production is located, can be quickly translated into paper production. Consequently, improvement in the currently depressed operating conditions of the industry could be rapid.

Higher Production Likely in 1944

Finally there has been a greater recognition of the essentiality of kraft paper to the war effort and of its importance to civilian morale as the war has continued. Kraft paper's usefulness as a substitute for many other commodities has become more greatly appreciated. Because of the potentialities of a rapid turn-about in a large proportion of the industry's restrained production facilities and an increasing recognition of the part which kraft paper plays in the total economy, it is our belief that the production of kraft paper can show and will be permitted to show an increase over 1943 production. The amount of that increase is, of course, problematical. Our guess would be a minimum of around 100,000 tons and a maximum of perhaps double that amount or sufficient to equal the 1942 production.

January Newsprint Statistics

Production of newsprint in Canada during January 1944 amounted to 242,658 tons and shipments to 209,599 tons according to the News Print Service Bureau. Production in the United States was 60,354 tons and shipments 61,102 tons. The output in Newfoundland was 20,863 tons and shipments were 13,437 tons making a total North American production of 323,875 tons and shipments of 284,138 tons. Total production in January 1943 was 316,961 tons and shipments were 297,026 tons.

The Canadian mills produced 9,114 tons more in January 1944 than in January 1943, which was an increase of three and nine tenths percent. The output in the United States was 9,438 tons or thirteen and five tenths percent less than in January 1943, in Newfoundland production was 7,238 tons or fifty-three and one tenth percent more, making a net increase of 6,914 tons, or two and two tenths percent more than in January 1943.

Stocks of news print paper at the end of January were 98,456 tons at Canadian mills, 10,244 tons at United States mills, and 46,587 tons at Newfoundland mills, making a combined total of 155,287 tons compared with 115,550 tons on December 31, 1943, and 188,368 tons at the end of January 1943. During the winter some tonnage is accumulating at points from which water shipments will later be made.

New Econ-O-Matic Drive Handbook

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Newsprint Output Declines 8.7 Per Cent in 1943 Below Previous Year

By R. S. Kellogg, Secretary News Print Service Bureau

Economists estimate that during 1943 something like two-thirds of the industrial output of North America consisted of war materials and supplies. This, of course, brought about many well-known and much-publicized difficulties in the way of getting manpower, equipment and raw materials for civilian goods. There were also governmental restrictions upon the making of less essential articles.

Under these circumstances it is somewhat surprising and really remarkable to cast up the account and find that the North American output of paper and paper board in 1943 was at least as great as in 1942. In the case of United States it is figured that some 16,800,000 tons of paper and paper board were turned out by the mills last year or nearly 400,000 tons more than in the preceding year. This more than overbalanced the decreases in output in Canada and Newfoundland.

To a great extent this unexpectedly large production in the United States was accounted for by the increase in paper board output, the total of which was nearly equal to the combined tonnage of all other paper grades. Much paper board, of course—and also a considerable quantity of other kinds of paper —went directly into war uses. Hence, the enforced reduction in civilian consumption.

Production Decreased 8.7 Per Cent

While there was some reduction in newsprint production and consumption, both were larger than seemed likely at the beginning of 1943. Production was helped through the use of reserve supplies of wood, and consumption through the corresponding use of paper stocks. A large increase in demand by advertisers for space, together with the surpassing of all previous circulation records, brought great pressure for more newsprint.

North American production of newsprint in 1943 rounded up to 4,024,000 tons. This was a decrease of 8.7% from the output in 1942 or 383,000 tons.

Last year's production was the least in any year since 1938 when the output was 3,713,000 tons. However, as has been mentioned at various times previously, the 1938 output was as abnormally low as the 1937 tonnage was abnormally high, so the only sound comparison is with the average of 4,328,000 tons for those years. On this basis the 1943 continental production of newsprint was the least in any year since the 4,021,000 tons made in 1935.

The 1943 output of North American newsprint was supplied to the extent of 74% by Canadian mills, 20% by United States mills and 6% by Newfoundland. The decrease in Canada from the preceding year was 6.1%, that in the United States 15.5%, and in Newfoundland 14.9%.

Canadian production in 1943 was maintained at a relatively better rate than that in the United States or Newfoundland. To get a smaller figure than the 2,983,000 tons of newsprint made in Canada in 1943, we need only to go back to 1939 when the output was 2,869,000 tons.

To get a smaller figure than the 805,000 tons made in the United States last year, we have to go back over 40 years. Similarly, to get a figure comparable with the 236,000 tons made in Newfoundland, we must go back to 1928.

The 4,024,000 tons of newsprint turned out in North America in 1943 was equivalent to 68.5% of an assumed capacity of 5,872,000 tons. The closest operating approach to assumed capacity that the North American mills as a whole have reached in recent years was in 1937 when the output was 4,944,000 tons, or about 87% of theoretical capacity.

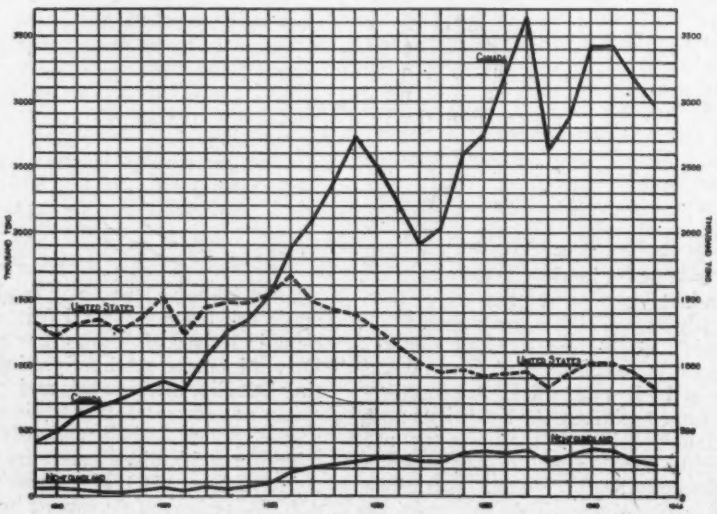
Shipments were 53,000 tons more than production during 1943, leaving mill stocks of 116,000 tons on December 31, compared with 168,000 tons twelve months earlier. This brought mill stocks down to the lowest point since December 1937.

Exports and Imports Decline

Official figures from Ottawa are to the effect that exports of newsprint from Canada in grand total amounted to 2,810,000 tons last year compared with 3,005,000, or a decrease of 6.5% from 1942.

Canadian overseas shipments in 1943 were only about half of the average in the years just preceding the war, but they were nevertheless larger than in 1932.

Exports of standard newsprint from the United States in 1943 were reported by the



Newsprint Production, U. S., Canada and Newfoundland, 1914-1943

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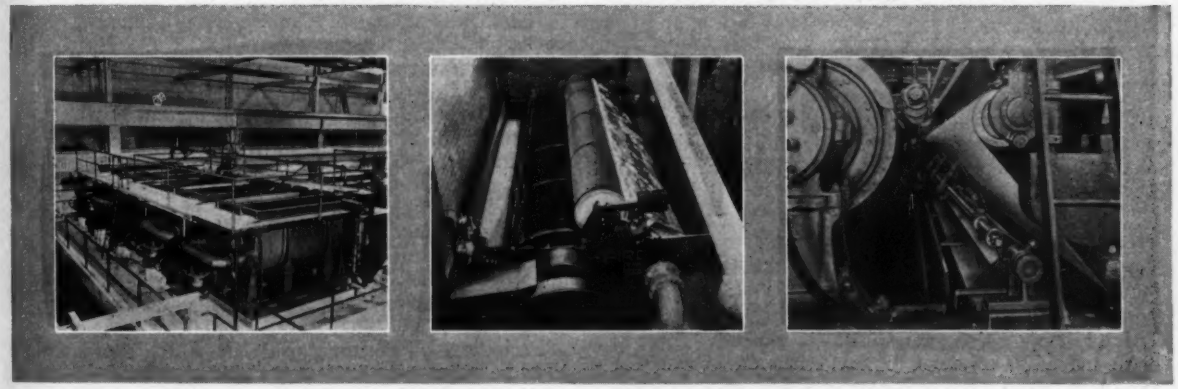
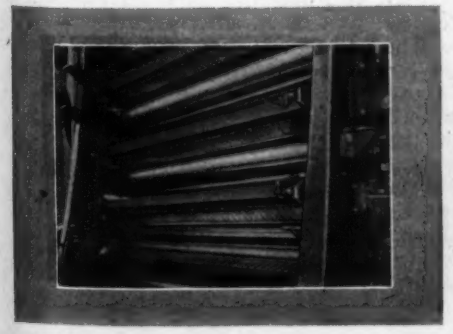


(*Above*) **BIRD SCREENS** are helping almost every papermaker in North America to make the most of his paper stock, however severe the present dirt conditions. They deliver to the paper machine a homogeneous mixture of clean fibres and water, even in weight and free of lumps, strings and slime.

(*Center*) **BIRD SAVE-ALLS** are helping to conserve every pound of papermaking fibre — recovering it automatically from the machine waste water and returning it for immediate conversion to useful paper at lowest net cost.

(*Right*) **VICKERY FELT CONDITIONERS** are helping to keep countless paper machines on the job without mid-week shut-downs for felt wash-ups — helping maintain quality and economy by keeping felts continuously clean.

(*Lower left*) **VICKERY DOCTORS** are helping to keep every papermaking role in shape to do its best work and keep on doing it day in and day out.



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mills to have been nearly 15,000 tons compared with 18,000 tons in 1942. If at some future time Washington policy again permits the release of official figures, such figures will undoubtedly be larger than those above given. This will be because Washington export statistics include under the heading of "News Print" a number of closely related grades which do not come within the standard definition.

Publishers' and Mill Inventories Lower

Stocks at North American mills on December 31 last totaled 116,000 tons while those on hand or in transit to publishers reporting to the ANPA amounted to 367,000 tons. This gave a total of 483,000 tons compared with 647,000 tons in the same hands on December 31, 1942.

The manufacturers' stocks were reduced 53,000 tons during the year and those of the publishers reporting to the ANPA were reduced 112,000 tons. The drawing of this large tonnage from stocks was, of course, what enabled the publishers to use only 4% less newsprint than they did in 1942, while there was a reduction of 8.7% in production.

The 367,000 tons of newsprint held by ANPA publishers at the end of 1943 was, however, still a substantial tonnage amounting to 52 days supply at the current rate of consumption. Smaller supplies in the hands of these publishers have frequently occurred, notably at the end of March 1941 when they held 297,000 tons and at the end of April 1940 when they had 281,000 tons.

Consumption Drops 4 Per Cent in Year

Consumption by publishers reporting to the ANPA was 2,720,000 tons of newsprint paper in 1943. This was 115,000 tons or 4% less than in 1942 and 227,000 tons or 7.7% less than in 1941 compared with the official goal of a 10% reduction from 1941.

Checking as closely as possible with the best available figures of production, imports, exports and changes in stocks, it appears that the total use of newsprint in the United States in 1943 may have somewhat exceeded 3,650,000 tons.

Last year's use of newsprint corresponded exactly with the 1936 tonnage, but whereas the per capita consumption in 1936 was nearly 57 pounds, the same tonnage in 1943 amounted to a per capita consumption of 53½ pounds. The Bureau of the Census in Washington gives an estimated continental population of the United States of 136,527,000 on July 1, 1943, which is somewhat larger than had been anticipated and makes a correspondingly smaller per capita consumption.

The 1943 consumption of newsprint in the United States on a per capita basis, while somewhat reduced, was still 10 pounds more than that reached in the depth of the depression of 1933. It is also somewhat surprising to go back to the boom year of 1920 following the close of World War I and find that per capita consumption of newsprint at that time was only 42 pounds. Newspapers have come a long ways since then in size and volume of circulation.

Circulation of Newspapers off Slightly

The annual compilation by *Editor & Publisher* of reports to the Post Office Department in Washington upon the circulation of English language dailies in the United States for the twelve months ending September 30 last, show a fractional decrease from the preceding period for morning papers, 4% increase for evening papers and 6% for Sunday issues. This rounds up to a weighted average increase of 3% over the year ending September 30, 1942. Total circulations are materially in excess of any previous record.

Circulation of these morning papers during the latest period is reported to have been 17,078,000 copies, that of the evening papers 27,315,000 copies, while the Sunday issues went to 37,292,000. Under war conditions people are hungry for news everywhere and all the time.

Many advances continue to be made in subscription and advertising rates.

Advertising Volume Gains

The volume of advertising of every kind in the United States in 1943 far exceeded general predictions at the beginning of the year. In fact, there were some pessimists at that time who forecast decreases. The exact reverse was true and there were notable increases in the ues of all media.

The linage of newspaper advertising in the 52 leading cities of the United States checked for a long time by Media Records was 12½ percent more in 1943 than in 1942. With the exception of 1937 it was more than in any year since 1931. Moreover, it would have been larger had not many newspapers been forced during the latter part of the year to accept less advertising than offered in order to come within their permitted supply of newsprint.

Retail advertising in 1943 made up a smaller proportion than in the preceding year, while classified and general adevrtising gained in relative importance.

In actual linage there were gains in every classification but by no means uniformly. The volume of retail advertising in 1943 for instance, was only 2.8% more than in 1942. On the other hand, there was an increase of over 20% in automotive advertising—notwithstanding the fact that there were few automobiles for sale—an increase of nearly 26% in general advertising and an increase of 30% in classified publicity. Classified advertising is rated as especially profitable to newspapers, and this increase was very largely due to the "help wanted" items.

Periodical advertising last year exceeded that of 1942 in volume by 27% and was larger than in any twelve months since 1930.

Newspaper advertising in recent months has been chiefly by firms which have something to sell to a public able to buy, but there has been a great deal of the goodwill and institutional type of advertising in magazines by organizations now wholly devoted to war production. This is to keep their names and products before the public preparatory to the time when they again will have something to sell. The large use of this type of advertising evidently explains much of the greater proportionate increase in periodical advertising last year over newspaper advertising.

This writer has given up all attempts to prophesy about radio. The use of this publicity medium in 1943 went so far beyond anticipation that someone else may do his own hazardous forecasting.

With reports for December not yet received, it seems certain that the total expenditures by advertisers for radio time via the four major U. S. networks in 1943 exceeded $150,000,000, or nearly one-third more than in 1942.

Counting in smaller networks, local stations, cost of talent and follow-up, it is possible that total expenditures for radio publicity in 1943 approached $275,-

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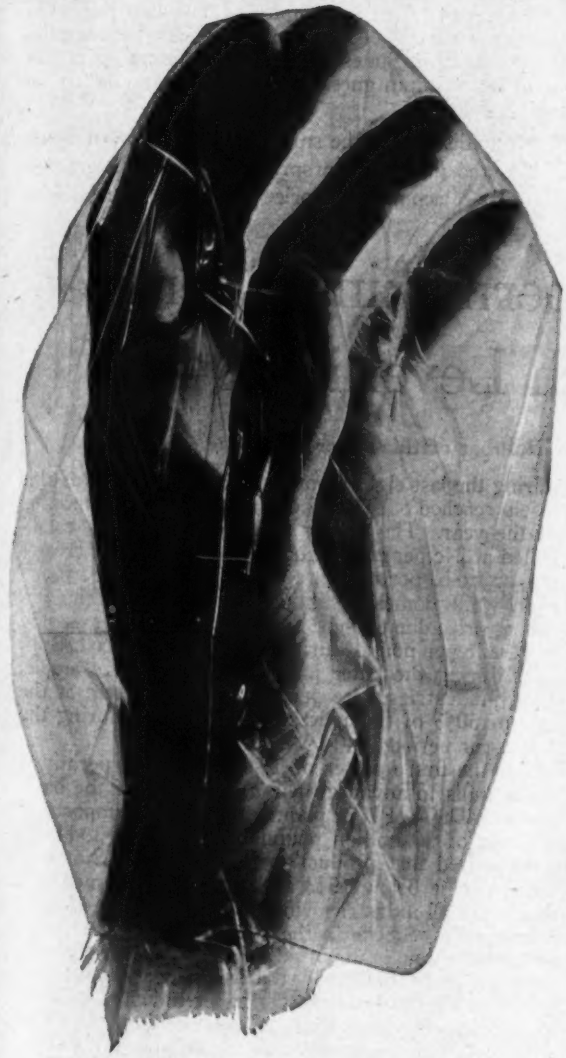

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In paper sizing and coatings, Methocel's film-forming properties are unusually effective. These properties are responsible for Methocel's ability to form a continuous barrier on the surface of the stock for retarding penetration of oils, greases, ink vehicles, paraffin and paper lacquers. The use of Methocel, therefore, promotes production, saves raw materials and lowers costs.

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Other Dow products for the Paper Industry include: Dowicides, Ethocel, Caustic Soda and many other chemicals.

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000,000. This makes radio a major advertising medium. The only question seems to be when the public will get tired of having such stuff dinned into its ears.

Outlook

The latest WPB statement in Washington anticipates a total of 1,638,000 tons of newsprint available for all purposes in the United States during the first half of 1944, but so far it has not promised that the use of this entire amount will be permitted. The WPB talks about restoring inventories voluntarily reduced by some newspapers below the permitted maximum in the latter part of 1943, and also proposes a reserve to meet appeals for extra tonnage.

If the 819,000 tons per quarter available for 1944 usage in the first half of the year were continued throughout the twelve months with no change in publishers' stocks, the total consumption in the United States in 1944 would be 3,276,000 tons—a decrease of about 10% from the 1943 consumption.

Speculations of this kind, however, may be somewhat vain and entirely upset by the course of the war. There is considerable support in high quarters for a belief that the war with Germany may terminate by the middle of 1944. This would considerably ease the manpower situation notwithstanding the job still to be done in the Pacific. Strenuous efforts and much publicity in the United States and Canada have produced a gerater amount of pulpwood than appeared probable in the middle of 1943. These efforts are being maintained and should yield further results. Publishers' stocks might also be further drawn upon. An optimist might be tempted to say, therefore, that a figure of 3,276,000 tons of newsprint consumption in the United States in 1944 is a minimum rather than a maximum guess. But optimists are often unsafe guides.

Notwithstanding the small increases allowed by the OPA, the price of newsprint is now further below the general commodity price level than ever before.

Output and Use of Papermaking Chemicals Increases To High Level in 1943

Written Expressly For the Annual Review Number of the Paper Trade Journal

The American chemical industry deserves high praise for its successful efforts to provide the huge demands of the War and lend-lease and to fill the large requirements of civilian needs. Production of most heavy chemicals consumed by the paper and pulp industry in 1943 was adequate. The price structure was stable with relatively few fluctuations during the year.

The outlook for the chemical industry as a whole for 1944, according to the Bureau of Foreign and Domestic Commerce, is favorable for chemical-consuming industries. Shortages that occurred in some chemicals in 1943, such as soda ash, are likely to be overcome in 1944.

Blanc Fixe

Mill demand for blanc fixe was moderate throughout the year. Prices remained unchanged. Quotation on the pulp was $40 per ton, in barrels, at works. The powder was quoted at $60 per ton, F.O.B. works.

Bleaching Powder

Demand for bleaching powder was heavy for both war and civilian requirements for the year. Prices were stable and ranged from $2.50 to $3.10 per 100 pounds, in drums, car lots, f.o.b. works.

Casein

The production of casein was seriously curtailed in 1944, due to the necessity of increasing food production for War purposes. The production of casein dropped considerably and the 1943 estimate is about 22 million pounds against normal production of 50 million pounds annually.

On May 1, 1943 casein was put under allocation by the WPB and licenses were given to the importers permitting some 28 million pounds to be imported during the last eight months of the year. Most of this casein reached our shores during the last three months of the year. The ceiling price on casein was established at 24c per pound for carload lots, f.o.b., creamery or f.o.b. port of entry for the Argentine. However, while domestic continued to be sold at the full ceiling price due to short supplies, Argentine was sold at 18-22c per pound during the period covered. Supplies during the latter part of the year were ample. Paper industries were permitted to use casein at the rate of 50% of the average quantity used during the three year period 1940-1942.

For the first quarter of 1944, the WPB permitted paper mills to advance their use to 60% of the basic period. The WPB is planning to permit imports at the rate of 50 million pounds annually for 1944. It is estimated that production in the United States in 1944 will be below 1943 and that the total available casein for all industries will be approximately 65 million pounds. Stocks in the Argentine are quite high and production is reported to be good. Therefore, there is every likelihood that sufficient supplies of casein will be available to the paper industry in 1944 at prices no higher than the present ceiling. There is a belief in Government circles that supplies of casein in the Argentine will become low during the end of 1944 and, therefore, it is generally agreed that it would be advisable for the paper industry to carry as large a stock as possible, which under the present arrangements would amount to an average four to six months' supply.

Caustic Soda

War and lend-lease requirements for caustic soda were very heavy during the greater part of the year. The supply situation was reported tight at the close of the year. The solid was quoted at $2.30 per 100

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The smooth glazed surface cuts down friction of flowing and falling stock which promotes better agitation. Any desired type of agitation can be built in. Mid feathers or fins of this material also assist the smooth flow of stock.

Cleans as easily as a china dish, merely by flushing the hard, smooth surface with a hose.

The cost is no more than concrete construction and there is no surface deterioration which cuts maintenance costs.

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pounds; the flake and ground at $2.70 per 100 pounds, in drums, car lots, f.o.b. works.

China Clay

Consumption of china clay by the paper industry declined substantially, due to the drastic curtailment of production in coated papers. Prices were stabilized and ranged from $7.50 to $15 per ton on filler grades, and from $12 to $22 per ton on the coating grades, at mines. Imported clays ranged from $13 to $25 per long ton, shipside.

Chlorine

Demand for chlorine for war and civilian consumption continued heavy in 1943. The reduced brightness standard of paper to 74, aided the wider distribution of supplies. Production was at a notably high level and strict allocation distributed supplies to adequately meet all essential needs.

Rosin

The Savannah market for "G" gum rosin increased about 20% during the year. Quotation during the latter part of the year were around $4 Savannah basis. Prices for gum rosin size remained firm at the ceiling prices established during May, 1942. Due to the squeeze on rosin size producers, the OPA on December 22, 1943 announced the removal of ceiling prices on gum rosin size effective December 29, 1943. This permitted rosin size prices to advance about 20% or in line with the advance in the prices of the rosin. The prices for wood rosin and wood rosin size remained as heretofore, due to the price ceiling regulations. Wood Rosins of the "FF" grade were selling at prices around the maximum for March 1942 or $3.18, Southern Ports shipping points. The prices for wood rosin size was established on this same basis and were unchanged throughout the year.

The shortage of labor in the South, both for the production of gum rosin on the farms and wood rosin at the various producing plants, became acute during the year. It is predicted that the production of rosin during 1944 will materially decrease unless the labor situation improves.

Salt Cake

Consumption of salt cake by the pulp industry was reduced by the curtailed production of kraft pulp. Supplies were adequate. Prices were firmly stabilized and ranged from $15 per ton on domestic grades, in bulk, to $16 per ton on the chrome cake.

Soda Ash

Heavy demands for war requirement, lend-lease and civilian needs, resulted in a tight supply situation in the second half of 1943, and continued over into 1944. Production was high, but shipments were delayed for some weeks in mid-year by lack of labor for packaging. Prices were stable and unchanged as follows in, car lots, per 100 pounds: bulk, $.90; in paper bags, $1.05; in barrels, $1.35.

Starch

The price differential of cash corn set by the OPA and the price farmers could realize by converting corn into pork, resulted in a tight corn market during 1943. Supplies of starch for sizing and other industrial uses were often inadequate, and on a hand-to-mouth basis. Prices were firm and ranged from $3.10 on pearl, to $3.20 on powdered starch. All prices per 100 pounds, car lots, f.o.b. Chicago.

Sulphate of Alumina

The demand for sulphate of alumina, commercial grade, continued at a very high rate during 1943. Most paper mills were unable to build up any sizeable stocks. All alumina products, including the basis material for alum, namely bauxite ore, was under strict allocation and control during the year and no doubt will continue so for the duration of the war. The Government, it is reported, has built up sizeable stocks of both bauxite ore and aluminum pigs. There is a fair possibility that the situation might ease some time during this year, permitting larger quantities of bauxite ore to go into chemical manufacture. There was no price change on commercial alum during the year.

Iron Free Sulphate of Alumina remains quite scarce. Limited quantities are being made and there has been some price increase during the year. Unless the WPB finds it possible to release some controls over this basic product during the year, we expect that iron free alum will remain scarce for ordinary use. Many paper manufacturers have gone over to the use of commercial alum whenever possible.

Sulphur and Talc

Ample supplies of sulphur were available for all purposes in 1943. Consumption was very heavy. Prices were unchanged throughout the year. Contact prices ranged from $16 per long ton, f.o.b. mines, to $17.50 per long ton at Gulf Ports.

Consumption of talc by the paper industry was fair to moderate during 1943. Prices were stabilized and unchanged. Quotations on papermaking grades ranged from $16 to $21 per ton, at works.

Name Vegetable Parchment Committee

The War Production Board has announced the formation of a Vegetable Parchment Paper Industry Advisory Committee. The Government presiding officer is H. O. Nichols.

The committee members are as follows:—Folke Becker, Rhinelander Paper Company, Rhinelander, Wis.; H. B. Kuhns, Nicolet Paper Company, Depere, Wis.; Charles H. Cashmore, Patterson Parchment Paper Company, Bristol, Pa.; Paul F. Moore, Westfield River Paper Company, Russel, Mass.; W. L. Dawson, Hammersley Manufacturing Company, Inc., Garfield, N. J.; Robert F. Nelson, Glassine Paper Company, Conshohocken, Pa.; Ralph A. Hayward, Kalamazoo Vegetable Parchment Company, Kalamazoo, Mich.; Marvin Preston, Thilmany Pulp & Paper Company, New York, N. Y.; Paul E. Hodgdon, Deerfield Glassine Company, Monroe Bridge, Mass.; John L. Riegel, Riegel Paper Corporation, New York, N. Y.; H. L. Joyce, Hartford City Paper Company, Hartford City, Ind.

Paper Box Orders Down

CHICAGO, Ill., February 14, 1944—Orders for folding paper boxes in January declined 3.3 per cent from the preceding month and 2.2 per cent from January, 1943, reflecting the reluctance of paper box manufacturers to accept new orders, the Folding Paper Box Association of America reported today.

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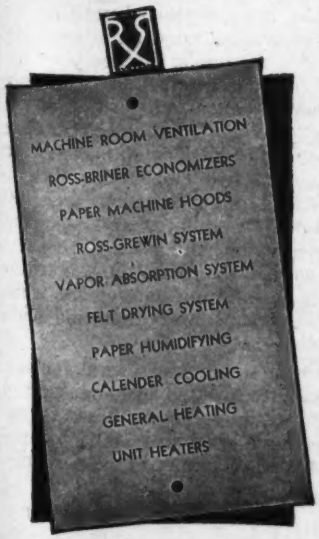
Paper making of tomorrow will utilize every modern method for increasing production, improving quality and reducing costs. For more than twenty years, Ross engineers have steadily advanced the standards in each of these major objectives—paved the way for successful commercial production of new paper products. With their unique background of experience and knowledge in this field, they are keeping apace of the further advances that new developments will make possible. Include recommendations by Ross in your plans for Paper Making of Tomorrow.



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Production of Paper Board Up 6 Per Cent In 1943 Above Previous Year

By Grafton Whiting, Statistician, National Paperboard Association

The paper board industry in 1943 produced 7,500,000 tons (preliminary) which represents an increase of about 6% over the 7,074,000 tons in 1942, and which is 4.5% below the record high of 7,857,500 in 1941. The uses of paperboard fall roughly into two categories—military and civilian. Demarcation between the two is not always obtainable since the output of some plants—food stuffs for example—may be supplied to either division. However, it is known that throughout 1943 military demands have increased with corresponding decreases in board for civilian uses. The mills, handicapped by a shortage of raw materials and in some instances by a lack of man power, have been unable to meet the full demand. This has caused the volume of unfilled orders to mount to new high records and has developed a shortage. Recognizing this situation, the government has issued directives stipulating that orders for war needs must receive preference over others.

The source from which orders come does not make much difference in the operation of the mill except that board for military use must come first. The problem from the mill standpoint is the necessity of disappointing old-time customers and the allotment of a limited tonnage where it will cause the least amount of distress.

Paper Board Grades

The output of paper board mills, when analyzed, falls into two major classifications: namely, container boards and boxboards. Container boards are used by the fabricators of corrugated and solid fiber shipping containers, which are in general use for the shipment of a wide variety of products by freight, express, parcel post, etc. A further subdivision separates container board into liners or the outer-facings, straw, etc., commonly called .009 corrugating material, from which the inner fluted member is made, and chip, used for certain parts of corrugated containers and for the inner plies of solid fibre boxes.

Boxboards, which are composed of a wide variety of grades, colors and finishes, are subdivided into folding carton boards, set-up, or rigid boards and other, including specialties of all kinds. To illustrate the relative importance of these divisions and subdivisions, Chart I is drawn, which shows the volume and the percentage that each bears to the yearly total during the past four years.

A review of past years shows that the relationship between the volume of container boards and boxboards has not varied greatly—with container boards generally accounting for slightly more than one-half of the total. While both are used for packaging, they serve for the most part, different classes of customers, and conditions in certain years bring more demand for one type than the other. In 1943 the increased proportion of container-board that was made reflects the strong military demand for shipping cases in packaging supplies. These include shipments to our armed forces in this country and abroad, and also to lend-lease in many parts of the world. The increase in liner-board is particularly significant since foreign shipments require a heavy strong board to withstand the rough usage and many handlings before final destination is reached. In the boxboard group folding box grades have advanced at the expense of the set-up and other divisions. Many articles for military needs must be put in convenient packages, or kept separate, or in sets within the shipping containers, and large quantities of folding boxes serve this purpose. Furthermore, new types of boxes have been developed through the ingenuity of the fabricators of folding boxes in replacing other means of packaging not now available because of the scarcity of certain critical raw materials.

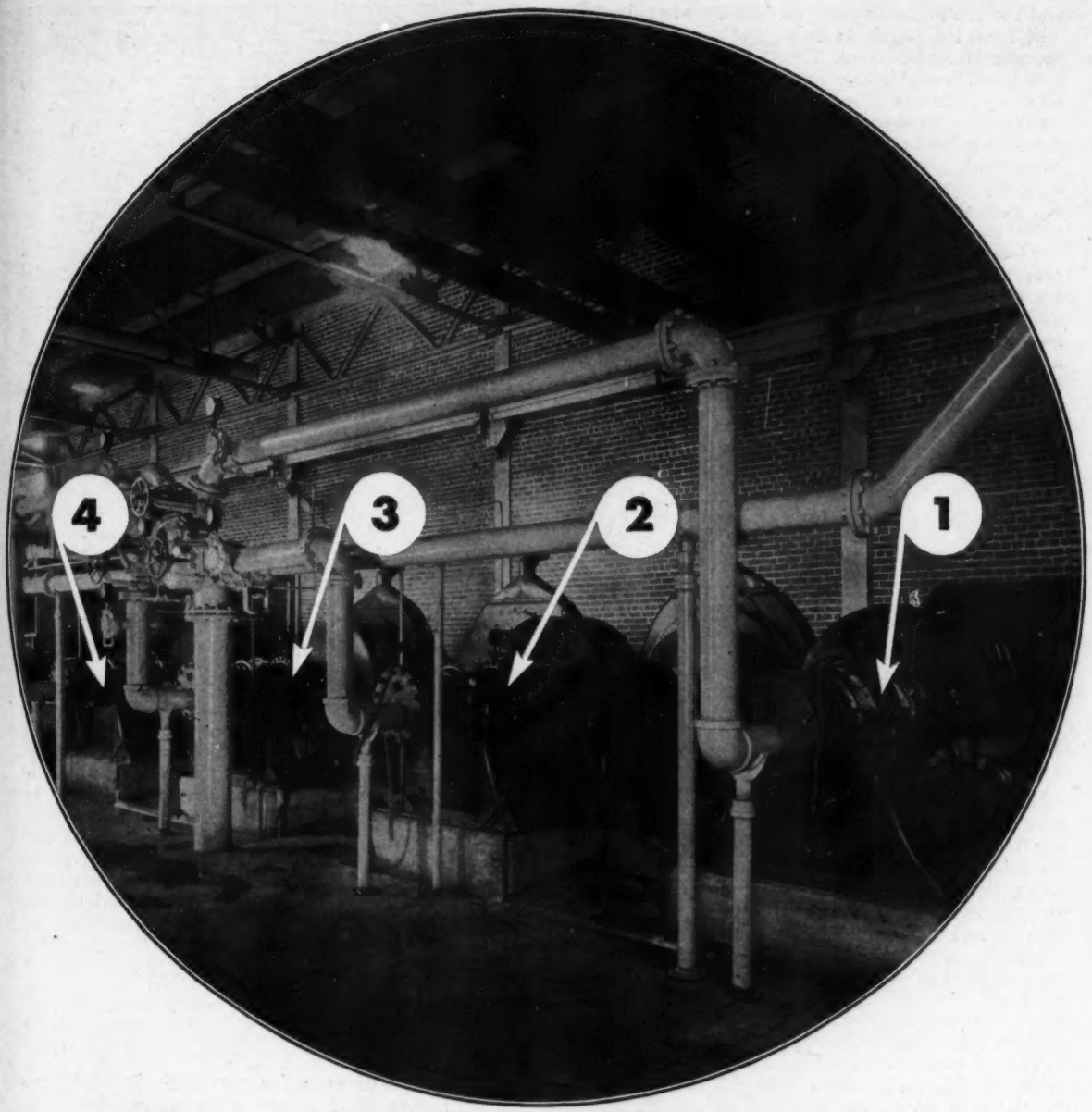
Raw Materials

The two principal raw materials entering into the production of paperboard are waste papers and pulp. Papers are collected from stores, office buildings, printers, converters of paper products, and the individual homes. Pulp is produced in domestic mills and imported. The supply of waste paper is a local problem since it must be collected in each community where the volume is sufficient to warrant the handling and transportation. Pulp, on the other hand, is produced in pulp mills in comparatively few locations both in this country and in Canada and Newfoundland.

Waste Paper

The failure of waste paper collections to meet consumption demands has been a serious obstacle, during the closing months of 1943 and the opening of this year in maintaining paperboard production. Inventories of stocks on hand have been so far depleted that many mills have been forced to curtail output for want of this raw material. Recognizing the seriousness of the situation, the paperboard mills as far back as June of last year inaugurated an advertising campaign to impress upon the public the necessity for saving waste papers. A substantial sum of money was donated for this purpose and later in the year the War Production Board and the Government Salvage Division joined this effort to make nation-wide the call for saving waste paper. In October the Office of War Information added its influence, using some 150 radio stations throughout the country and stressing the need for paper conservation and salvage of waste paper. Towards the end of the year, the American Newspapers Publishers Association entered the campaign with a manual on paper conservation and wide spread newspaper publicity.

The cause of the shortage is due to several factors. The scarcity of pulp had necessitated an increased use of waste paper as a substitute for new fibres. In the past, paperboard mills have used over 80% of the total waste paper consumed, but now the paper mills



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and the roofing mills have increased materially their take from the supply available and thus reduced the paperboard mills' share. Large quantities of paperboard and paper in the form of packaging and for other uses have been sent abroad which has depleted seriously the quantity which otherwise would be available for collection in this country. The military requirements for low grade paperboard made mostly of waste papers have sharply increased and much of this goes overseas. The ceiling prices of waste paper were established in 1941 and are still in effect. There has been no recognition of the mounting labor cost in collecting and processing waste paper where the need for higher wage rates to meet competitive labor conditions has been acute. The incentive for larger collections of waste, which in the past has always been dictated by price, is now unavailing because of the government's adherence to the 1941 level.

The average weekly receipts, the gain or loss in inventory, and the prevailing prices (mixed papers East and West averaged) as reported by identical paperboard mills representing a substantial percentage of the industry, are shown in Table I.

TABLE I. WASTE PAPER. AVERAGE WEEKLY RECEIPTS, INVENTORY CHANGES, AVERAGE MIXED PAPER PRICES

	1942			1943		
	Receipts	Inventory	Prices	Receipts	Inventory	Prices
Jan.	80,100	+ 1,400	$14.00	62,400	— 2,700	$ 8.25
Feb.	82,100	+ 2,900	14.00	66,100	— 4,400	11.00
Mar.	90,200	+ 7,500	14.00	70,100	— 2,500	13.75
Apr.	88,400	+14,000	14.00	70,500	— 3,900	13.25
May	78,700	+12,800	13.25	68,800	— 6,700	14.00
June	59,700	+ 7,400	8.50	69,700	— 5,800	14.00
July	53,800	+ 2,800	5.75	66,000	— 2,600	14.00
Aug.	56,400	+ 100	6.00	67,000	— 8,700	14.00
Sept.	57,800	— 400	6.25	65,400	— 8,300	14.00
Oct.	60,700	— 900	6.25	64,400	— 6,700	14.00
Nov.	58,200	— 2,000	6.00	66,100	— 3,200	14.00
Dec.	54,500	— 2,600	6.50	65,100	0	14.00

January, 1944		
Receipts	Inventories	Price
70,700	+ 3,400	$14.00

The inventory of stocks on hand stood at 141,700 tons January 1, 1942. It continued to increase during the first half of 1942, aided by the strong response to the salvage campaign of 1941-42 and further because production fell off rapidly in the second quarter. In fact, waste was so plentiful that the mills were unable to take and store all that was offered. An increase in paperboard demand during the last half of the year brought the inventory down slightly from its peak and it stood at 332,600 tons at the close of the year. Throughout 1943 the loss was continuous, with 106,600 tons remaining at the end.

The joint effort of the War Production Board and other of the Government agencies, the American Newspapers Publishers Association and the paperboard mills in the appeal to the public to save waste paper has substantially increased the collections during January 1944.

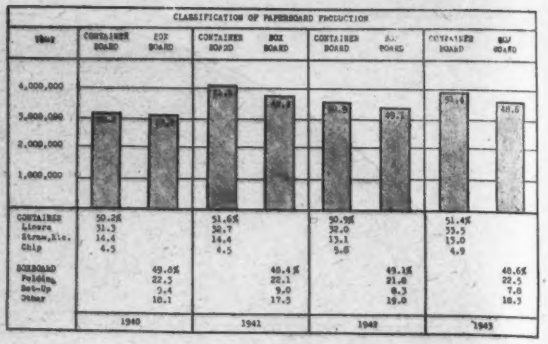


CHART I.

The fact that no loss in inventory occurred in December and that improvement was registered in January indicates that a turning point has been reached, at least for the time being. The importance of this change for the better is self-evident, but there still remains a scarcity of paperboard for essential purposes.

Pulp Supply

The production of domestic pulp during 1943 is estimated to be 9,050,000 tons which is a decrease of 11.5% under 1942. Canadian production is estimated to be about 5.8% under that of a year ago. The amount of pulp available for the domestic market, rather than total production, is of particular interest to the paperboard mills since, with the exception of the kraft mills, they are dependent for their pulp supply upon purchases in the open market. A separation by grades shows that market is composed of 70% Sulphite, 15.5% Sulphate, 10% Groundwood, with 4.5% of other grades. The source of the supply is that amount of domestic pulp made available for purchase and that which is imported. During 1942 the division by groups of States and imports is given in percentages. With the scarcity of pulp, which developed in 1943, imports assumed a larger proportion and these are shown for comparison with 1942 in Table II.

TABLE II. SOURCE OF SUPPLY

	1942					1943
Grade	Atlantic	Lake	South	Pacific	Imports	Imports
Sulphite	16%	4.5%	4.5%	35%	40%	47.5%
Sulphate	5	5.	48.	12	30	39.
Groundwood	10	10.	—	—	80	83.5

The supply of pulp for the domestic market is shown in the table below as an average monthly amount for each quarter year during 1942 and 1943. In addition there is given the average monthly changes of the inventory as reported by identical mills representing a substantial portion of the paper and paperboard mills dependent upon purchased pulp. This permits a review of the general trends in simple terms shown in Table III.

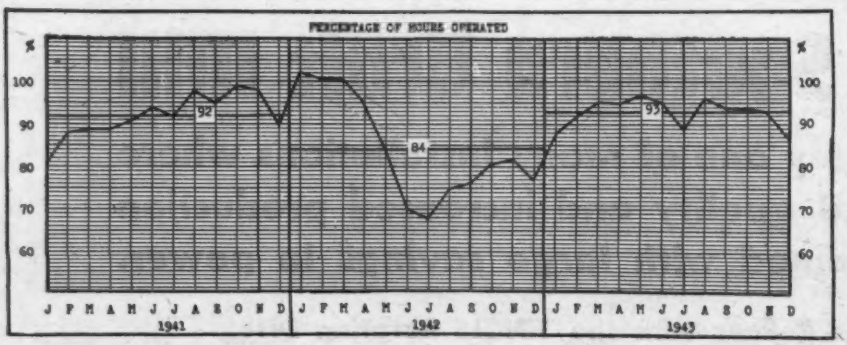
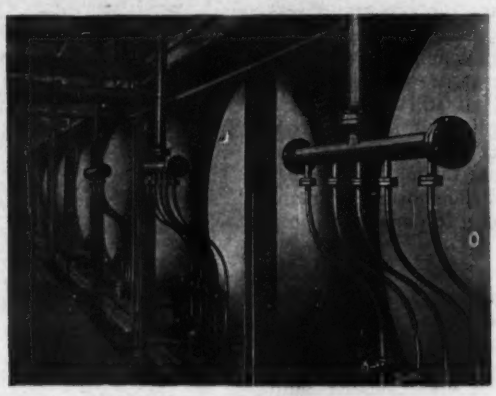


CHART II.

Pulp is supplied to satisfy the demands of the paper and paper board mills in fulfilling their production schedules. In the first quarter of 1942 output was close to capacity, and the insufficient



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supply of pulp had to be augmented by withdrawals from inventory. In the second quarter the supply was stepped up in anticipation of continued peak production, but orders fell off and surplus pulp was added to inventory. During the third quarter, in spite of reduced pulp supply, the consumption fell still lower and a further addition to the stock pile was made. From then on to the close of 1943, the supply has been less than needed due to the growing demand for paper and paperboard of all kinds and the shortage of manpower, principally in cutting wood to permit the pulp mills to increase their output.

Recognizing the seriousness of the situation, the War Production Board issued an order M-93 in June 1943, directing all purchasers and consumers to obtain approval for deliveries of pulp. Following this a Requirements Committee was established to effectuate a program of determination under which pulp is allocated, not to exceed amounts specified as earmarked for use in manufacture of particular types of paper board, and non-paper products.

The latest directive issued December 24, 1943 covers all pulp whether purchased or made for own use by integrated plants. Its purpose is to assure an adequate supply to sustain the war effort and essential civilian requirements and to bring into balance the supply and consumption, thereby arresting a further decline in inventories of pulp which are now at a minimum practical operating level. The directive covers the first quarter of 1944 with an allocation of 837,000 tons of pulp for each month, estimated to produce 1,400,000 tons of paper and paper board. Essentiality in end-use has been a determining factor in the allotment, and paperboard, particularly the shipping container division has been given a favorable position. There has been an increase in the number of men employed in cutting pulpwood in Canada during the month of January. Some additional men have been brought from Canada to work in the northern woods of the U. S. A. and, through changes in war production plants on the Pacific Coast, some men have been released for pulpwood cutting. In the South, the effort to increase the volume of pulpwood from the farms has received further impetus through changes in the draft deferment regulations as applied to farm workers.

There is often a considerable lapse between the time the wood is cut in the North and the actual conversion of the wood into pulp, but if the mills can be reasonably assured of a future supply, they will feel free to draw more heavily upon their present inventories. The southern mills, however, are more fortunate since the interval between cutting and pulping is, for the most part, of short duration and any improvement in supply is quickly felt.

Percentage of Hours Operated

The percentage of hours operated, shown on Chart II, is obtained by dividing the actual hours the mills are running by 144 hours, or six days of 24 hours each. Some mills under the stress of heavy demand operate on the seventh day of the week, and in consequence the percentage may rise over 100%.

Activity during 1941 attained an average rate of 92% and showed an upward trend from the beginning which continued until April 1942. At this time the reduction in the bank of unfilled orders, which started at the close of 1941 (see Chart IV), had reached the point where curtailment of production was necessary. The running time was lessened accordingly and dropped off rapidly until August 1942 when the demand again picked up. From then on and throughout 1943 activity remained at a high level with a new all-time high average of 93%. The year's performance was remarkable in that the changes from month to month, barring holiday periods, did not vary from the average up or down more than 5 points.

It will be noted that the percentage of hours operated follows in general the line of production on Chart III next shown. This is consistent since changes in the volume of production dictates increased or decreased running time, but the two lines are not identical since it is found that there is an average of from 3% to 5% yearly gain in the output per hour, due to improvements in plant and equipment and in increased efficiency. Further variants occur when new and faster operating machines are added or when old and slow moving units are closed down, and again when the demand is strong, pressure is exerted to attain maximum output; conversely with a lack of orders, there is a tendency to slow down and lengthen out the running time.

TABLE IV. ORDERS, PRODUCTION, ORDERS UNFILLED
Average Weekly Tons and Orders Unfilled at End of Quarter

Year	Periods	Orders Received	Production Made	Orders Unfilled
1941	1st Quarter	148,800	134,600	337,000
	2nd Quarter	165,300	149,100	509,200
	3rd Quarter	162,300	155,200	578,400
	4th Quarter	158,800	160,100	523,100
1942	1st Quarter	161,100	167,000	436,000
	2nd Quarter	119,600	135,200	223,800
	3rd Quarter	119,900	119,300	236,200
	4th Quarter	143,100	129,900	379,600
1943	1st Quarter	154,900	143,200	511,200
	2nd Quarter	157,900	148,200	580,700
	3rd Quarter	147,600	145,400	579,800
	4th Quarter	145,700	143,600	589,800
1944	January only	147,800	143,200	597,000

Orders and Production

Incoming orders are contrasted with production on Chart III, by reducing each to a percentage figure, with 100% equal to 6 days at full operation. To distinguish between period in which orders exceed production, the intervening space is left white, while production in excess of orders is emphasized by the black area.

The significance of this display lies in the fact that following each rapid increase in orders, a reaction takes place with production greater than incoming orders; and the duration of the period of adjustment is in ratio to the extent to which the high level had risen. Over a given period when the bank of unfilled orders reaches the level at which the movement started, the white area is offset and balanced by the black area.

TABLE III. DOMESTIC MARKET PULP
Average Monthly Supply and Inventory Gain or Loss*

Quarter	1942 Domestic	1942 Imports E	1942 Total	1942 Inventory	1943 Domestic	1943 Imports E	1943 Total	1943 Inventory
1st	148,600	101,400	250,000	— 4,400	122,200	100,900	231,000	—15,500
2nd	165,000	100,900	265,900	+ 6,500	111,500	107,300	218,000	—15,100
3rd	144,000	86,700	220,700	+18,500	100,400	107,000	207,400	—23,600
4th	119,600	103,200	222,800	—17,700	102,600	93,400	196,000	—11,400

* Reported by identical mills representing a substantial part of the purchased pulp.
E Estimated.

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During 1941 the white area predominated until October with incoming orders in excess of production. Following this for a period of 10 months until August 1942, the black area shows the reverse situation. At that time the cycle was almost in balance except that the bank of unfilled orders was somewhat higher at the close than at the beginning (see Chart IV). At the close of 1942 and during all of 1943 the area has been white with unfilled orders continuously gaining with the mills unable to meet the demand, Table IV.

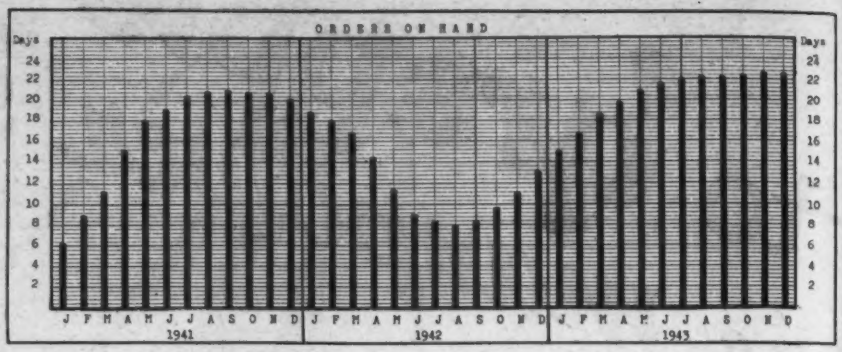

CHART IV.

The average weekly production was 148,000 tons in 1941, 138,000 in 1942, and 144,000 tons in 1943. Averages, however, do not disclose the relative differences in performance. In 1941 production was on an ascending scale throughout the year and this continued during the first quarter of 1942 although a heavy draft was made upon the bank of unfilled orders. From then on output dropped sharply until September when business improved.

1943 opened with a good volume and improved gradually until a peak was reached in July and continued from then on at a high rate of production. If a middle figure half way between the high and low output is considered and holiday periods disregarded, there was a spread of 25% above or below the middle in 1941, 35% in 1942, and only 10% in 1943. This consistency in the rate of output was made possible by the strong demand for paper board throughout the year. It has permitted fairly steady hours of operation and has aided in the economical scheduling of orders to be run and has been a factor in the development of mill efficiency.

Days To Run

Orders and Production as plotted on Chart III illustrate the changes that took place, comparing the movement of each set of figures. The gain or loss between the two is the increase or decrease in the bank of unfilled orders. To judge the extent of this change, Chart IV is drawn to show orders on hand, using an expression "days to run." This is the necessary length of time at full operation to complete the unfilled orders.

Starting in 1941 with 6.5 days to run, an upsurge in demand occurred, greater in extent and duration than any that had taken place previously. Towards the later part of the year, at the top of the movement the days stood at 21.2 and remained at this high level for 17 weeks. The reaction which followed carried the bank of unfilled orders down to 8 days in August 1942, completing the cycle which had lasted 18 months.

Beginning with September another influx of orders started which has already over-topped and out-lasted the 1941-42 movement and as yet is far from complete. The record high in 1943 came in August at 23.0 days. In January of this year it reached 23.6 days. From the low point of 8 days in August 1942, the bank of orders has almost tripled, and in December 1943 stood at over 600,000 tons. It is evident that the industry with a record high backlog of orders is assured a demand for all the output that can be made for many months to come. Cessation of hostilities in Europe undoubtedly would bring cancellations or reductions of orders for paperboard used in connection with certain types of ammunition, armament, etc., but much of the demand for food and maintenance packaging both for our forces and lend-lease would continue. Following this, the resumption in the manufacture of civilian goods would bring in a flood of new orders even before the Japanese phase of the war is ended.

Prices

The prices of raw materials used by the industry and of its finished products are all subject to ceiling restrictions. These have been in effect since 1941, and except for an increase in Fourdrinier Kraft and an advance in November, 1943, of from $1.50 to $3.00 per ton for certain grades of container and other paper boards, no changes have been made.

The industry recognizes the necessity for ceiling prices and avoidance of a run-away market, not only on what it buys, but also on its own output. This is particualrly true in the seller's market which

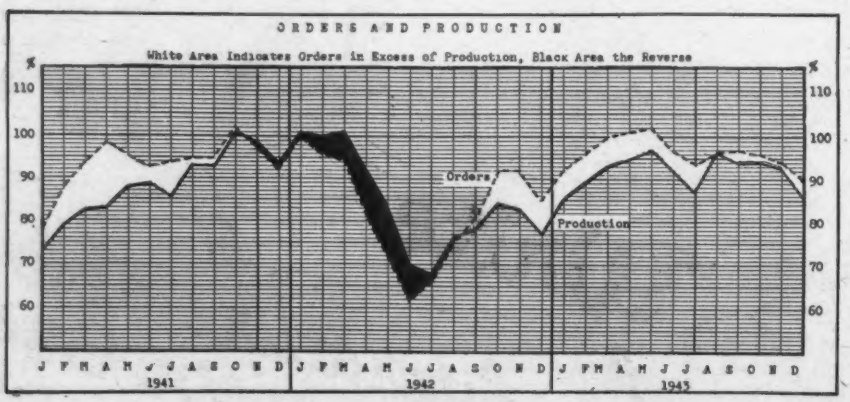

CHART III.

Cooperating with the vital fact that War needs must come first — in supplying Restigouche Bleached Sulphite Wood Pulp, the resources of their mill and research laboratories are maintaining the highest degree of quality and service consistent with today's conditions.

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now exists, where delivery, not price, is given first consideration. Cost of labor, coal, and other materials have advanced considerably in the two years since 1941, and the small advances noted above are inadequate to offset these changes. With the mounting demand for paperboard, price levels should be such that there will be the strongest incentive to maintain full production.

1943 has been our greatest boom year in a business sense, with employment, production, and national income greater than ever before. 1944 will also be a boom year for business with production at peak levels until Germany is defeated. Following this there is likely to be some decline, but this will be gradual and tempered by the continued production for the war with Japan. Many shortages in requirements for civilian use have accumulated and industry probably will continue to operate near capacity for some time to come. This will result in a gradual shift from military to civilian production. Fortunately, for the paper board mills, the transfer from the production of military needs to that for civilian use requires no change in plant or equipment such as confronts some industries.

The demand for paperboard is dependent upon general business and will follow its direction throughout the year. The essentiality of the products fabricated from paper board to many types of business is now recognized. The government's directives in the allocation of pulp and its participation in the effort to stimulate greater collection of waste paper is evidence of the recognition. The ability of the mills to keep in step with the business trend depends upon an adequate supply of raw materials, and this may well be considered the Number 1 problem before the industry at the present time. The record of accomplishment during 1943 in fulfilling promptly and adequately the military requirements is outstanding. The industry is determined that during 1944 this record shall be equalled or surpassed if possible in an all-out support of the war effort.

Brazil to Expand Pulp Production

WASHINGTON, D. C., February 14, 1944—Brazil's expanding industrial capacity will be augmented with the completion of a big chemical wood pulp and newsprint plant, designed to supply about 80% of Brazil's newsprint requirements and 50% of her wood pulp needs, says the Office of the Coordinator of Inter-American Affairs and continues;

The plant is located on the Tibagy River in Northern Parana, west of Sao Paulo. Production is scheduled to begin in the chemical wood pulp unit early in the year and in the newsprint unit late in the year.

Expansion of the paper industry in Brazil is another example of Brazil's industrial development. Similar expansion is being made in Brazil's steel industry with the great Volta Redonda steel plant, largest in South America, scheduled to begin production of steel rails in July.

In 1941 Brazil consumed about 190,000 metric tons of paper and 80,000 tons of chemical pulp, the prime manufacturing material for the paper industry. Brazilian cellulose fibers, waste paper and rags made up the difference of nearly 50,000 metric tons. Per capita consumption in 1941 was about 4 kilograms in Brazil as compared with 23 kilograms in Argentina and 100 kilograms in the United States.

Of the total paper consumption of 190,000 metric tons, newsprint accounted for 51,900, of which 45,900 were imported and 6,000 were produced locally. Brazilian production of paper and paper products, excluding newsprint, amounted to approximately 122,800 metric tons in 1941. About 15,000 metric tons of paper products other than newsprint were imported that year.

The pulp and paper mill being constructed in the State of Parana is designed to produce 40,000 metric tons of newsprint and 40,000 of wood pulp. It will exploit 620 square miles of timberland known as the Fazenda Monte Allegre property. Had this new plant been in operation in 1941, imports of newsprint could have been reduced to about 6,000 metric tons and imports of chemical pulp to 40,000.

In 1941 there were 38 paper mills in Brazil producing 129,000 metric tons of paper of all grades. About 53% of the total national production was manufactured in the 16 mills located in Sao Paulo.

The types of paper produced in Brazil vary from the cheaper wrappings to high grade specialty paper. Kraft, manila and cheap wrappings constitute most of the wrapping paper produced.

The wrapping paper is made largely of local fibers, waste paper and rags. It comprises the main product of a number of small mills. The better grade papers use a good deal of bleached pulp. The kraft requires a high percentage of imported unbleached sulphate pulp.

In 1941 the Brazilian mills produced 29,539 metric tons of printing paper (including 5,965 of newsprint), 26,554 of writing paper, 64,702 of wrapping paper and 7,975 of other kinds of paper.

Announces License Agreement

The Mosinee Paper Mills Company, through its secretary and general manager, N. S. Stone, announces the closing of an exclusive license agreement for the production of treated papers under U. S. Patent No. 2,338,710. The patent covers the treatment of both sulphate and sulphite papers on the paper machine, by size press, spray or other application, of proteins or casein to which suitable plasticizers have been added. Papers treated with these solutions are greatly improved in greaseproof, gas proof and moisture protection, as well as increasing the wet strength of the papers.

Paper being treated at the Mosinee Paper Mills Company, covered by this patent, are now being converted at the mill into Grade A Ordnance wrappers. These Grade A papers are used in the packaging of automobile, truck and other parts for the U. S. Army. Other papers manufactured and treated under the patent at the Mosinee Paper Mills Company are used by converters in the production of cartons and packages in which lease-lend foods, such as powdered and frozen eggs, vegetables, powdered soups and like products, are shipped to our Allies all over the world. Postwar uses for these papers are developing satisfactorily at the present time.

U. S. Patent No. 2,338,710 was issued January 11, 1944 to Lloyd L. Dodge of Mosinee, Wis., formerly at Wausau, Wis., who, with the cooperation of N. S. Stone, arranged the exclusive license agreement for the Mosinee Paper Mills Company.

The Mosinee Paper Mills Company has sublicensed the Port Huron Sulphite and Paper Company of Port Huron, Mich. under its exclusive agreement.

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Rising Demand For Waste Materials Sets Up New Record in 1943

Written Expressly for the Annual Review Number of the PAPER TRADE JOURNAL.

Papermaking materials were in heavy demand in 1943. The waste paper market had experienced a great surplus in 1942 through the notable cooperation of citizens in an ill-timed nation-wide collection drive. This caused a sharp and severe decline in prices during the summer of 1942 and No. 1 mixed paper dropped to 15 cents per hundred pounds. Mill buying continued to increase, however, as wood pulp allocations tightened and as collections of paper stock increased very slowly, prices recovered but were substantially under OPA ceilings at the beginning of 1943.

A short labor supply situation for collecting and sorting waste paper continued to keep supplies at a lower level than increasing needs. This resulted in an active demand in March, with prices back to full ceilings. During the remainder of the year, mill buying was very heavy, as more mills turned to waste paper to replace unavailable wood pulp, which they had normally preferred to use. A very strong market developed and the Office Of Price Administration cited a number of dealers and mills for alleged violations of ceiling prices. Prompted by the scarcity of wood pulp, a second nation-wide collection campaign, was sponsored by the WPB and the drive still continues to make excellent progress in 1944. Paper stock has now become so essential a material there appears no reasonable expectation that an unusable surplus will be collected during the duration of the war.

The price range of some major grades of paper stock, per 100 pounds, f.o.b. N. Y. on sales to mills, in 1943 was as follows: No. 1 Hard White Shavings; high, 2.87¼; low, 2.87¼: Heavy Book Stock, high, 1.67½; low, 1.46: Folded News, high, .75; Low, .63¾: No. 1 Mixed Paper, high, .70; low, .32½.

Price Range of Cotton Rags Narrow

A strong demand for cotton cuttings existed throughout 1943 and price fluctuations were conceded to be the smallest on record. Price ceiling established by the Office of Price Administration were successful in stabilizing the price structure in this market at the desired level. Almost all grades were maintained at full ceiling prices for the year. Shortage of labor continued to keep supplies sufficiently limited to maintain a strong market. The lack of manpower was experienced not only in the waste materials industry but also in the cutting-up trades, production of garments being naturally limited by the general war effort. Mill buying was so active and supplies required for papermaking were so urgent that packers had difficulty in making shipments as promptly as mills required.

All grades of cotton rags were active throughout the year. The demand of roofing mills for old cotton rags continued steady in heavy volume. Heavy Government orders to meet military requirements kept up a high production of roofing felt. Mills were limited to specific grades and this created a strong market. Roofing mills were frequently reported during the year to be in such urgent need of supplies, that waste paper was consumed to a much larger extent than formerly.

Old Cotton Rag Prices Are Stable

Because of OPA ceilings on old cotton rags, prices were stabilized at determined levels. In order to meet the very heavy demand for their products roofing mills readily absorbed about all available supplies at full ceiling prices. A similar situaton prevailed in mills consuming the higher grades of new cotton rags for papermakng. During the early part of the year prices were established under the General Maximum Price Regulation. During that period mill demand was largely confined to the colored grades in both medium and low price range, and demand for whites and unbleached cuttings was relatively light.

With the issuance of ceiling prices, the higher grades of cotton cuttings became active and mill buying continued to be maintained at full ceiling prices on all grades.

The price range of the major grades of cotton rags, per 100 pounds, f.o.b. N. Y. on sales to mills, in 1943, remained unchanged as follows: No. 1 Whites; high, 3.80; low, 3.80: Satinet Garments, high, 1.55; low, 1.55: Thirds and Blues; high, 2.20; low, 2.20.

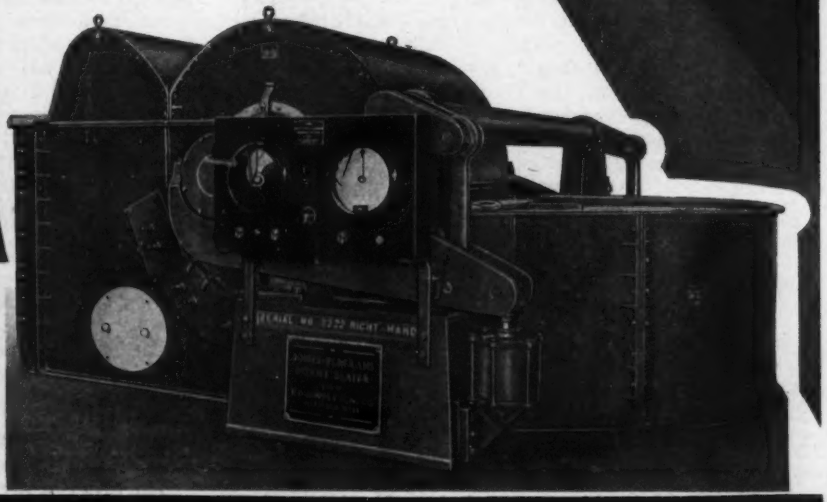
Heavy demands on mills producing insulating and other strong industrial papers to meet military requirements, was filled with difficulty in 1943, because of the limited supplied of old No. 1 Manila rope. Other fibers were also in strong demand. The strict limitation of use for Manila fiber aided in providing the maximum practicable supply for Government requirements. Prices remained at full ceilings on Manila rope.

Demand by mills for old bagging was restricted by limitation of specific grades for use in manufacturing roofing, the higher grades being reserved for respinning purposes. Trade reports indicated that the light volume of trading in old bagging during the past year was due to Government regulations in part, and to a substantial extent by the replacement of bagging by multi-wall kraft paper bags in which to package fertilizers, and many other materials and products formerly shipped in burlap bags. Prices were largely nominal and unchanged for the year.

Heavy war demands for twine, early resulted in a limitation order prohibiting the manufacture and use of Manila fiber for cordage and twine for other than military and a few special essential uses. Cotton and paper twines largely replaced imported fibers. Kraft paper twines rapidly increased in use for civilian purposes and good reports were made of the use of paper twines in use in corn binders and tying purposes.

Waste paper receipts for the year 1943 totaled 6,065,000 tons compared with a total of 6,043,000 tons in 1942. Estimates show consumption was 6,354,000 tons in 1943; inventories in December, 1943, 55% below 1942.

THE TREND IS TOWARDS THE JONES-BERTRAMS BEATER



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Summary of Government Orders Affecting Pulp and Paper in War Effort

By Lynne M. Lamm, Washington Correspondent, PAPER TRADE JOURNAL.

The paper and pulp industry of the United States during 1943 was probably more affected by governmental orders and pronouncements than in any other year of its history. These regulations emanated from WPB and OPA and they covered more ground than any orders issued by these agencies the previous year. It is particularly fitting at this time to call the industry's attention to these pronouncements. Effort has been made to tabulate all of these important notices and orders, a check having been made with the official records of these organizations.

Use of paper in commercial printing was brought under control January 8, 1943 by WPB Director General of Operations through the issuance of Limitation Order L-241.

During any calendar quarter of 1943 a printer might put paper into production only according to one of the following schedules:

(1) Not in excess of 22½% of the gross weight of paper used by him during the base period, 1941.

(2) Not in excess of 90% of the paper used by him during the corresponding calendar quarter of the base period.

In neither case was a printer permitted to use paper during the year 1943 in excess of 90% of the entire base period.

Printed matter as defined in the order meant any paper with ink applied to it by any of the graphic arts processes. "Put into process" was defined as meaning the first application of ink to paper in the production of printed matter.

Exempted from the order was the printing of newspapers, wall paper, boxes, converted paper products, magazines and books. Use of paper for these products was governed by various other limitation orders and a conservation order. Three of these, concerning converted paper products, boxes, and books were issued simultaneously with L-241, and the others were issued at a prior date.

Situation of Printing Paper Amended

Later that month L-241 was amended. The wording of the order would have forced the printer to accept the schedule providing the lowest tonnage. The amended order allowed the printer to use either schedule.

The amended order also made it clear that limitations of this part of the order applied to "printed matter" as defined in paragraph (a) (2) of the order.

On February 15 manufacturers of glassine, greaseproof and genuine vegetable parchment papers were allowed to produce up to 100% of the quantity they made during the base period under which they operated, it was ruled through issuance of General Preference Order M-241 as amended. The base period was for the six months ending March 31, 1942. These types of wrapping paper had a quota of 85% before issuance of the amended order.

A proposed second curtailment (not to exceed 10%) in printing paper anticipated for the second quarter of last year beginning April 1 was discussed at a meeting of the Commercial Printing Section of the Printing and Publishng Industry Advisory Committee, held in Washington February 16.

Commercial printing interests including relief, planographic and gravure processes and related service industries were represented at the meeting, at which E. W. Palmer, Deputy Director of the Printing and Publishing Division of WPB, was Government Presiding Officer.

It was announced February 20 that the second scheduled curtailment of newsprint—a proposed cut of not to exceed 10% which would have been effective April 1—would be held in abeyance for the time being.

This was announced to members of the newspaper industry advisory committee meeting by W. G. Chandler, Director of the Printing and Publishing Division, and Donald J. Sterling, Consultant to the Chairman of the War Production Board. It was emphasized, however, that the statement would have no effect upon the provisions of the order governing the use of newsprint.

On February 20 Schedule X to Limitation Order L-120 was issued, which standardized and simplified the manufacture of wax paper household rolls and specified packaging and packing methods to save paper, paperboard, and shipping space.

All limitations on the production of container board, folding box board, set up box board and special industrial boards were removed February 23, when WPB General Conservation Order M-241 was issued as amended.

Provisions of Limitation Order L-241, governing the use of commercial print paper were relaxed February 26, for the benefit of public utilities and companies doing work for any governmental agency. Action was taken through the issuance of L-241 as amended.

It was announced March 4 that there would be no further curtailments in the use of print paper in newspapers, magazines, books, and commercial printing at least until after July 1.

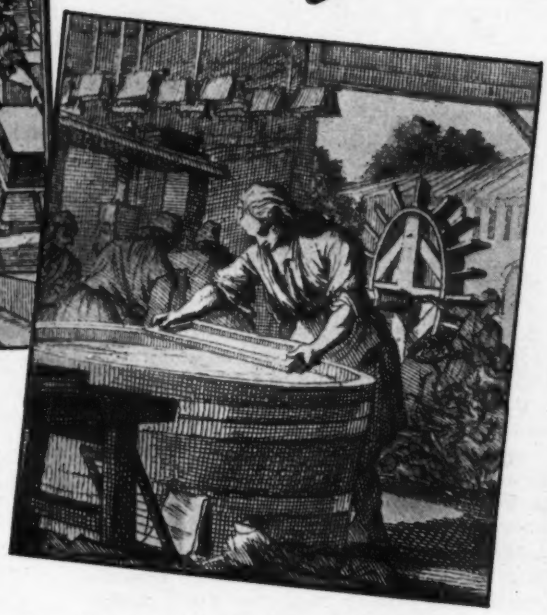
Manufacturers of paper and paper board were required, March 12, to set aside each month, a reserve of Class B items, paralleling reserve production of Class A items, under the terms of General Conservation Order M-241 as amended.

The order as previously amended January 8 directed each manufacturer to reserve, each month, 2% of his quota of paper and paper board for the calendar quarter within which the month fell, subject to disposition by the Director General for Operations in order to meet emergency orders necessary to war or essential civilian activity.

Hardships of Converters Removed

To alleviate hardships in connection with the manufacture of converted paper products under General Conservation Order M-241-a, and make possible the

In 1689 there was a paper shortage too!



Few people knew of the paper shortage in 1689, because the making of paper was an art. Sheet by sheet paper was made, and only the royal and wealthy could use it. But, the art of making paper progressed into an industry until tons were produced faster than the early paper makers produced sheets.

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liquidation of inventories the order was amended April 7.

As amended, the order permitted the manufacture of the following products up to these percentages of 1942 production: table covers, all types, and shelf and drawer lining paper, 60%, and venetian blinds, 90%. Non-commercial decalcomania transfers were removed from the restricted list, as were fire works manufactured for the Armed Forces.

Paper and Paper Board General Conservation Order M-241 was amended May 15 to clarify and define certain points and to provide a clear and equitable basis for the classification of paper products for the industry.

On May 19 the country's newspaper publishers, who produce 1,787 daily newspapers, were asked to economize further in curtailing the use of newsprint by W. G. Chandler, Director, and H. N. Bitner, Deputy Director of the WPB Publishing Division.

It was announced July 1 that newspaper publishers were required to make further cuts in their consumption of newsprint during the third quarter, ranging up to 5 per cent for larger users.

On July 31 the manufacture of a number of paper articles was forbidden and restriction in the tonnage permitted for many other converted paper products was ordered.

Extension of the Waste Paper Salvage Campaign to all States east of the Mississippi River and to several States beyond, was announced August 9 by Paul C. Cabot and Arthur G. Wakeman, Directors respectively of WPB's Salvage and Pulp and Paper Divisions.

August 25 newspaper publishers were advised that they might replace damaged or destroyed inventory paper without violating the newsprint Limitation Order L-240.

New standards and maximum weights of six categories of writing and printing papers were fixed, effective September 1. The reduction in weights in certain papers actually increases by about 15% the area of paper available for commercial and governmental use, as well as for general public consumption.

To facilitate production of as many writing tablets for school children, as many facial tissues for women, as much stationary for business offices, and as many other products as possible out of the available paper supply, new schedules to Order L-120 were issued on September 1.

Newsprint Inventories Reduced

Newsprint inventories of publishers in 26 states in Northeastern and Central United States and in the District of Columbia were reduced from fifty days' supply to forty days' supply, and in 22 states in the South and West regions from seventy-five days' supply to sixty-five days' supply through an amendment to Limitations Order L-240 issued September 6.

September 28 newsprint publishers were required to make further cuts in their consumption of newsprint during the fourth quarter, beginning October 1, 1943. An additional reduction of approximately 5% in use was imposed by a new amendment to Order L-240. This was in addition to the cut of approximately 5% announced last July for the third quarter, which increased the limitations of the order as originally issued December 31, 1942.

It was announced on October 1 that the Government of the United States, as well as the newspaper, magazine, book publishers and commercial printers, was curtailing its use of paper. The Federal savings, as reflected in orders to the Government Printing Office, were estimated at about 25% of annual paper usage.

To simplify and clarify paper and paper board procurement, Conservation Order M-241 was amended on October 18. This amendment revised the industry's production reserve of paper and paper board tonnage, particularly as it affected filling governmental orders.

Reserve production requirements were changed to permit the WPB to direct delivery of as much as 10% of a paper mill's production in any month. The new amendment made it possible in the future to modify the percentage as a whole or by paper grades, or grade groups, thus making the reserve production only as large as is needed to meet war needs.

A further restriction of the use of paper for commercial printing purposes amounting to 5% was authorized October 21 through the issuance of an amendment to Commerical Printing Limitation Order L-241. The amendment was effective during the fourth quarter of 1943, the Printing and Publishing Division stated, and made the total curtailment of commercial printers' paper usage 15 per cent below the use during the base year 1941.

Eight schedules of Limitation Order L-120, covering standarization and simplification of paper and paperboard, were revised October 23 to adjust minor factors which recent operation indicated were out of balance in the original draft of the order.

James F. Byrnes, Director of War Mobilization, November 13, urged a reinvigorated drive to conserve and salvage paper. "The war needs for paper and paper board are greater than our present ability to produce," Justice Byrnes said. "We need to curtail all unnecessary uses, and to make sure all waste paper is saved for the Government Salvage Drive."

Sharp Cuts in Newsprint Use Forecasted

Cuts in newsprint usage of nearly 30% for some of the larger newspapers of the country in 1944 were forecast in a recommendation made November 13 by the Newspaper Industry Advisory Committee, Harry M. Bitner, Director of the Printing and Publishing Division, announced.

Donald M. Nelson, Chairman of the War Production Board, November 19 called upon industry and the people of America to conserve and save paper.

"The remaining weeks of the year offer the American people their best opportunity to make up the serious paper shortage now existing," Mr. Nelson said.

"The great quantities of wrappings, boxes and cartons ordinarily used during the holiday season, added to normal supplies of old newspapers, magazines, bags and the like—if saved and promptly turned in to local salvage organizations—will go a long way toward relieving the deficiency.

"Also, by avoiding unnecessary wrappings at home and at retail stores, and by reusing shopping bags and other paper saving containers, a huge quantity of vitally needed paper and paperboard can be conserved."

The manufacture of specified weights of paper for art reproductions (without advertising), corporate securities, checks, domestic and foreign currency, and telephone directory covers was authorized in an amendment to Commercial Printing Limitation Order L-241 on November 20.

Although newspaper publishers, who used less print paper than they were permitted to use in the fourth quarter of 1943, could increase their consumption by that amount in the first quarter of 1944, they may not increase their inventories by that amount, according to an amendment to Limitation Order L-240, issued November 20.

Inventories of 12 different weights of printing papers, in the hands of printers and dealers, may be used until March 15, 1944, the Printing and Publishing Division said on December 8. The release of this inventory paper for 90 days, beginning December 15, was effected through an amendment to Commercial Printing Order (L-241).

The paper-making industry is facing a critical situation, Rex W. Hovey, director of the WPB Paper Division, told the three newly organized WPB Paper Industry Advisory Committees at their first meeting during December. Mr. Hovey said the shortages of wood pulp and waste paper, combined with the increased demands of the military services, particularly in the packaging field, necessitate not only conserving paper, but utilizing substitute fiber, so that as much virgin pulpwood as possible may be saved.

The use of wrapping paper, including wrapping tissue, in the manufacture of converted paper products will be restricted during 1944 to approximately 65% of the 1942 base period production, it was announced December 18.

The WPB announced December 20 that its Requirements Committee had made determinations of the paper and paperboard to be produced during the first quarter of 1944.

Over-All Production off in 1944

Over-all U. S. paper and paper board production during the first quarter of 1944 was estimated at approximately 1,400,000 tons per month, or about 2.3% below the average monthly production in the third quarter of 1943. Proposed minimum production is, however, about nine per cent less than that estimated per month in the first quarter by the mills. The program determination was issued by the program vice-chairman, J. A. Krug, who is also chairman of the Requirements Committee.

Government orders for boxboard, folding and set-up boxes, must be filled first and less essential demands met thereafter, a joint meeting of three Industrial Advisory Committees was told December 29 by Government Presiding Officer Ralph A. Powers, of the WPB Paper Division.

The joint session was composed of newly selected representatives of the Boxboard, Folding Box and Set-up Box Industries, called to discuss mutual problems now confronting those industries, and advise WPB Paperboard Division, headed by G. G. Otto.

The OPA took care of all price orders and other orders affecting the industry. On January 7, 1943 to equalize an added freight burden between producer and consumer on shipments of woodpulp from Canada to the United States, the OPA extended to Canadian woodpulp producers basic transportation allowances comparable to those applying to United States producers.

Maximum prices on tablets, pads, blank books, and certain other school supplies sold by school-operated stores could be based on the cost of purchase plus the percentage mark-up taken in March 1942 on the same or similar articles, it was ruled on January 10.

Previously the applicable price regulation—Maximum Price Regulation No. 225 (Printing and Printed Paper Commodities)—required school stores to maintain their March 1942 selling prices. Amendment No. 3, providing for the change, was effective January 21, 1943.

Approximately 65% of the waxed paper sold in this country was brought under specific dollars and cents ceilings at levels generally 1½% below present ceilings OPA announced February 1.

It was ruled on February 2 that sellers of newsprint paper to the United States Government could make their quotations on an f.o.b. mill basis, without the allowance of carload freight.

In order to enable West Coast paper mills to obtain wood pulp not available in the West and allocated to them from the East by WPB, on February 23 OPA announced that the Eastern supplier of such shipments might charge the same maximum prices allowed on Eastern deliveries instead of the lower prices hitherto set for all deliveries west of the Continental Divide, and to Denver, Colorado.

Joint announcement of an increase of $4 a ton in the price which American and Canadian producers could charge and American and Canadian consumers could pay for standard newsprint paper was made February 27 by the OPA, and the Canadian Wartime Prices and Trade Board.

Pulpwood Under Price Control

Bringing pulpwood produced in the southeastern states under price control for the first time, on March 6 a 60-day freeze was placed on maximum prices of producers in this area, preparatory to establishing specific dollars-and-cents ceilings.

Increases in the maximum prices of pulpwood produced from four minor species—balsam, pine, hemlock and poplar—in Wisconsin, Michigan and Minnesota, as well as on pulpwood, other than Canadian, produced elsewhere and sold in these three states, were announced March 13. No change was made in the ceiling prices on spruce, the major species of pulpwood produced in these states.

New ceilings for distributors of several hundred coarse paper products were established March 23 to simplify pricing procedure.

A three dollar advance in the ceiling price of Fourdrinier kraft paperboard was announced March 30. The new base price of $63.00 per ton to become effective April 1.

A five dollar per ton advance in the ceiling price of kraft wrapping paper and kraft grocers and variety bag paper was announced on the same date.

Pacific Coast States were placed in a separate zone similar to that long established in the industry in a revision of the regulation governing kraft wrapping papers and bags, it was announced April 1. Chief result of the change was that at certain inland points the buyers absorbed a larger proportion of the freight on shipments, the seller benefiting proportionately.

Specific dollars-and-cents maximum prices for manufacturers of paper board plates and dishes, molded wood pulp plates and dishes, wood dishes, fiber spoons and forks, wood spoons and forks and liquid-tight containers were established April 7.

With the issuance of specific dollars-and-cents maximum prices for pulpwood in Maine, Vermont, New Hampshire and New York, OPA April 7 brought the last of the major pulpwood areas in the country under price control.

Specific dollars-and-cents ceilings were placed on

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pulpwood produced in South Carolina, Georgia, and Florida May 4, The 60-day freeze on prices established March 5 in the whole southeastern district was made permanent without changes for the nine other states in the district (Kentucky, Virginia, North Carolina, Tennessee, Alabama, Louisiana, Texas, Arkansas and Mississippi).

For purposes of simplification, on May 29 specific dollars-and-cents ceilings were announced on sales of paper board liquid-tight cylindrical containers by manufacturers, distributors and jobbers.

Publishers, printers and other manufacturers, as well as wholesalers and retailers, of printing and printed paper commodities may sell at ceiling prices which may be in effect at the time of future delivery, OPA ruled on June 2.

Merchants dealing in 27 classifications of fine papers and paperboards were provided June 4 with a means of quickly and accurately computing their ceiling prices.

June 9 newsprint produced in other than standard non-dutiable sizes was given specific dollars-and-cents ceilings.

Producers of sulphate wood pulp for shipment pursuant to allocation by WPB and produced with drying equipment not designed for the production of this pulp for sale on the open market, were provided by OPA June 22, with a means of obtaining maximum prices for these particular shipments higher than prevailing ceilings for usual sulphate wood pulp sales.

Six changes in the regulation establishing specific dollars-and-cents maximum prices for pulpwood in Maine, Vermont, New Hampshire and New York, were announced June 25.

Effective September 1, the ceiling price of standard newsprint paper would be increased $4.00 per ton, OPA and the Canadian Wartime Prices and Trade Board announced July 22.

Another two-months extension of the provision that raw material costs in Maximum Price Regulation No. 187 (Certain Paperboard Products) must be computed at levels on higher than the maximum prices in effect for these raw materials on March 31, was announced July 29.

Ceilings on pulpwood produced in Minnesota, Michigan, and Wisconsin were increased $1 to $2 per cord August 6.

Action was taken August 14 which permitted a $4.00 per ton increase in manufacturers' maximum prices of newsprint paper to become effective on or after September 1.

Changes Made in Coarse Papers

After further consultation with the industry affected, through the Coarse Paper Merchants' Advisory Committee, OPA made a number of changes in the regulation governing ceilings of distributors for several hundred coarse paper products, announcing them on August 17.

Dollar-and-cent maximum prices for manufacturers on 33 grades of groundwood specialty papers, representing over 90% of total production of these papers, were announced August 19.

On the same date manufacturers of book paper were given specific ceiling prices and pricing methods.

Formerly, under the General Maximum Price Regulation, each manufacturer determined his own ceilings on the basis of the highest prices charged by him during March 1942.

Maximum prices of writing paper and certain other fine papers, when sold by manufacturers, were placed under a new regulation August 20. Previously they were under the General Maximum Price Regulation.

Ceiling prices for gummed Kraft sealing tape were stabilized at approximately the levels of July through September 1941, it was ruled by OPA on August 25, when manufacturers' specific dollars-and-cents maximum on the standard grade of sealing tape were established on sales to distributors.

September 3 all manufacturers were held to selling levels on current sales of specialty paper bags and specialty paper envelopes or services connected with such sales in a new regulation governing this industry.

Pending issuance of a specific regulation governing their sales, merchants dealing in light weight book paper, writing paper, and certain other fine paper, doing business in seven Western states, were allowed to pass on to their customers the increased differentials authorized by recent paper manufacturers' regulations, OPA said September 13.

Distributors of toilet paper were reminded September 17 that their maximum prices must not exceed their March, 1942, percentage mark-up over cost or the specific percentage provided whichever is lower. At the same time, retailers also were reminded that in figuring their ceiling prices, they must not exceed the March 1942 mark-up over cost.

Changes in grade specifications, invoicing, and brokerage requirements of unsorted wastepaper were announced September 24.

A two-month extension of the provision that raw material costs in Maximum Price Regulation 187 (Certain Paperboard Products) must be computed at levels no higher than the maximum prices in effect for these raw materials on March 31, was announced September 28.

A different method for determining maximum prices for new grades of gummed Kraft sealing tape was announced October 4. This had no appreciable effect on the ceiling prices of such grades.

Pulpwood produced in Indiana, Illinois and Missouri was brought under price control for the first time October 14, with the establishment of dollar-and-cent ceilings for producers and dealers at highest prices prevailing during July.

Ceilings on paper shipping sacks at the manufacturer's level were established at prices prevailing between October 1 and November 30, 1941, in a new regulation announced October 16.

Price Advances are Allowed on Many Items

On certain direct sales of lightweight writing papers, manufacturers were allowed to add to their established ceilings the same differentials allowed for bond paper and related grades, it was announced October 20. Formerly, manufacturers could only add these differentials on sales to merchants.

How manufacturers of paper board containers, cartons, boxes, and other receptacles determine their ceilings, particularly for new products, was made explicit October 22 in a revision of the maximum price regulation covering certain paperboard products.

As part of a joint program with the WPB to encourage the production of the lower-priced grades of paper board made primarily from wastepaper, the OPA on October 30 increased paperboard ceilings at the manufacturer's level on nine different items for a limited period. WPB, by limitation and allocation orders, also will facilitate a shift in production to lower-priced grades.

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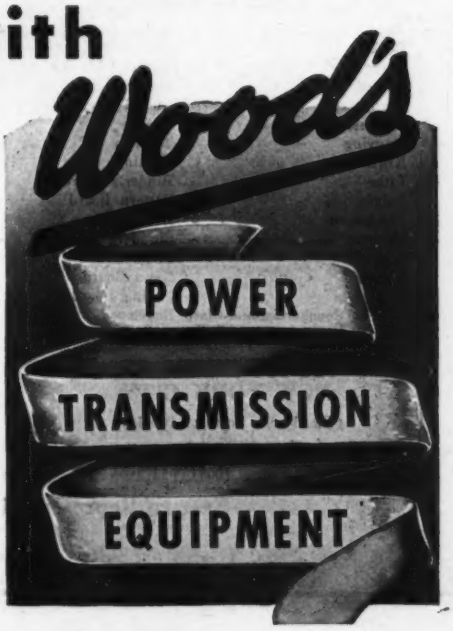

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The increases, which ranged from $1.50 to $3.00 per ton, became effective November 4, and remained in effect through January 14, 1944. The following day the former ceilings again apply unless OPA orders otherwise.

New lightweight groundwood printing papers, expected to be used soon for many magazines and books, were provided with specific premiums over the ceilings for standard weight printing papers, at the manufacturer level November 1.

Increases recently permitted in manufacturer's ceilings of writing and book papers for certain light weights being produced to conserve wood fiber may be passed on to their customers by printers, it was announced November 10.

J. Ronald Atwater was appointed Price Executive of the OPA Paper and Products Branch, Chester Bowles, Administrator, announced November 15.

Because of two $4-a-ton increases in newsprint paper during 1943, OPA on December 7 authorized a reduction in the number of sheets in tablets, pads and related products made from newsprint paper, so that production and sale of these items may be continued at prevailing ceiling levels.

During a four-month experimental period new light weights of newsprint paper may be priced by the addition of the extra production costs to ceilings for standard newsprint paper, it was announced December 16.

If either of two conditions is met, a manufacturer of certain paperboard products who because of substantial hardship is unable to supply commodities and services at established maximum prices, may apply for an adjustment in his ceilings, it was ruled on December 24.

As another step in its program to eradicate black market operations in the waste paper industry, OPA December 28 tightened certain provisions of the regulation governing waste paper sales.

So that all waxed paper products may be under one regulation, cutter box or household rolls of waxed paper, formerly covered at the manufacturing level by the converted paper products regulation, were added to the list of products subject to the regulation establishing manufacturer's ceilings for waxed papers generally, it was announced December 29.

To Give Course on Paper Controls

In his course on "Wartime Control of Materials" at New York University, Dr. Louis T. Stevenson plans to feature the priority and allocation problems of the pulp and paper industry and its related industries, such as printing and publishing. The course is given under the Wartime Training Program of the United States Office of Education, and there is no tuition fee for those who are engaged in war work and affected by priorities.

The session is at the Commerce Building, Washington Square, from 8:00 to 9:45 on Tuesday evenings starting March 14 and running for 15 weeks thereafter.

Dr. Stevenson has been teaching these courses for over a year, but this is the first time he has featured the paper orders. He was a CMP specialist with WPB, and is now the priorities specialist of the American Paper and Pulp Association.

The war effort warrants a shift in emphasis in the course to take in the paper orders as well as the CMP procedures.

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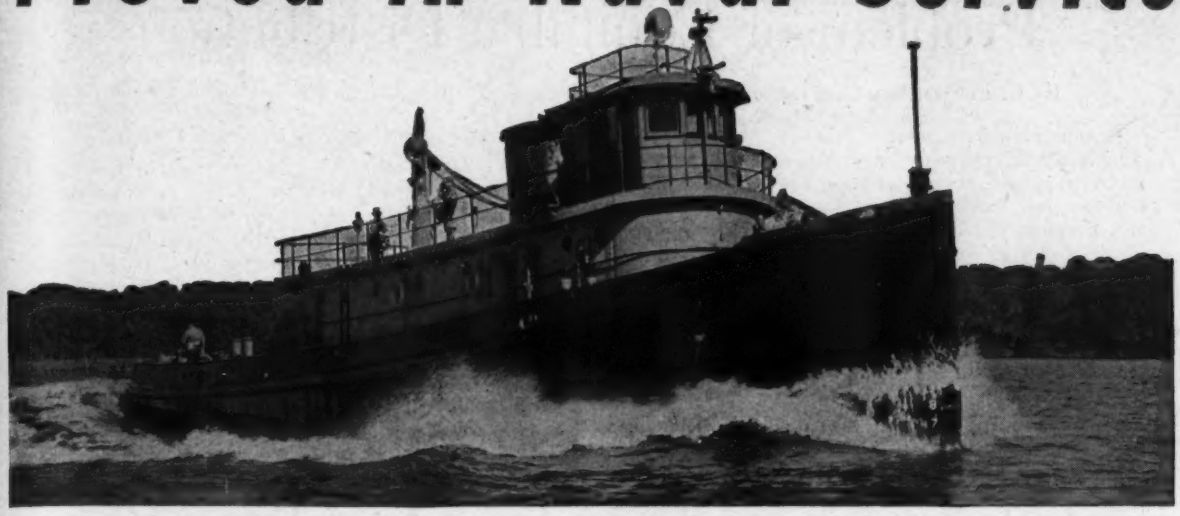

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Heavy Demand for Wood Pulp Complicates Problem of Equitable Distribution

By O. F. Swanson, General Manager, Pulp and Paper Trading Co. and J. Andersen & Co.

It can truly be said that no New Year is ever a completely happy one, and 1943 was no exception. Even in peace time the start of a new calendar twelvemonth forebodes trouble and sorrow, struggle and perplexity, as well as a measure of happiness, in all walks of life and, as the wood pulp industry is not immune to these inherent contributions, we realized clearly enough at the outset of last year that numerous intricate problems would confront the industry and, as the year progressed, some were found to be a great deal more difficult to cope with than had been anticipated.

Fortunately, however, a proper sense of balance enabled us to discern other things also, so that after having weighed the prospectives unemotionally, the future did not appear too dark, all the existing circumstances taken into consideration. Obviously, there was no evidence of a conclusive nature to give an insight into the probable future trend, yet there were unmistakable signs pointing to reduced production of wood pulp, regulated distribution and possible higher prices in 1943. No one seemed prepared to make positive predictions to this effect, but there were frank hints that something along this line was likely to develop.

Some in the industry, already endeavoring to foresee what lay ahead of us, not only for 1943 but even farther into the future, were planning to devise schemes for post-war business and although this seemed rather premature at the time, nevertheless recent experience in other matters had brought to the fore the danger of unpreparedness. Anyway this should be one of the reasons or explanations for their good intentions, and may contain enough semblance of facts to be considered plausible.

However, we were all agreed that many problems of both major and minor importance affecting the industry following a cessation of hostilities would require the best brains in the world to solve but, of course, without any knowledge whatever of the peace terms, and possible trade agreements to be enacted, it was and still is incomprehensible to a majority of the trade that any constructive or dependable post-war plan could be formulated, before the peace terms are known. Unquestionably, the re-conversion problems of pulp and paper mills will be vigorously tackled in the transition period, and the successful solution of the problems can only be a matter of time.

If last year did nothing else it certainly did put the wood pulp and paper industry on the map. Few people in the civilized areas of the world are today ignorant of the prime importance of these essential commodities. Volumes were written, or spoken, during 1943 about wood pulp, paper and board and the great contribution of these materials to the prosecution of the war as well as to the welfare of people at large. The campaign of education on this subject is still in full blast, and as a matter of fact, the public has become so "paper and pulp minded" that the present can correctly be referred to as truly the cellulose age.

Distribution Was Greatest Problem

The question of distribution was a bone of contention throughout last year and while no partiality in the distribution of pulp was, of course, ever intentionally practiced, either by the WPB in allocating tonnage or by anyone having to do with shipments, there were occasions when both producers and consumers in individual cases felt they were not being treated quite fairly. Nor did they refrain from very frankly speaking their mind, yet when convinced that everyone concerned was doing the best he could, their attitude usually changed quickly from austereness to tolerance.

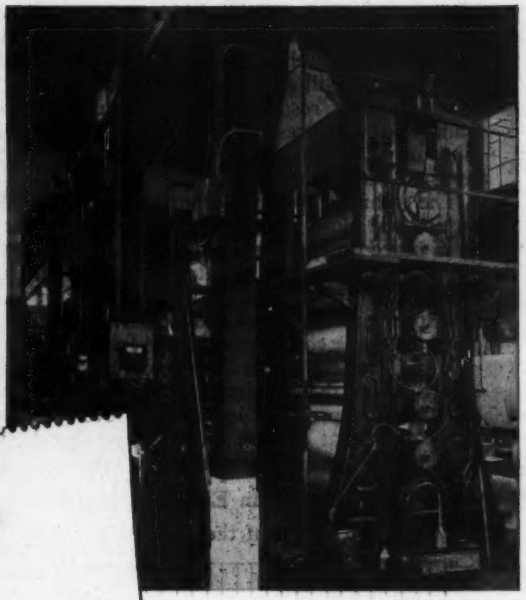
The questions of price and quality were generally regarded of secondary importance and were accorded very little attention on the part of consumers, all of whom were eager to cover their tonnage requirements in order to keep their paper and board mills running to the limit, in conformity with the Government's desires. Although the quality of their products may not have always equaled their pre-war standards, nevertheless, serious complaints on quality were something almost unheard of. In fact, 1943 broke all records since World War 1, in wood pulp, paper and board in this connection.

Likewise and undoubtedly for the same reasons, users of pulp generally did not object to OPA ceiling prices, although a few pulp manufacturers did early in the year and were promptly permitted to increase prices by about $5 per ton on a few grades of Mitscherlich sulphite and kraft pulp. Toward the end of the year, other pulp producers also complained when they felt the pinch of advance manufacturing costs, and applied to the OPA for higher ceilings on chemical pulp to compensate them for the added production costs. This matter is now in the hands of the OPA and is being given careful consideration. While no one knows what the outcome will be, there is a feeling within the industry that the request, if not fully granted, will be mutually satisfactorily compromised because, as in the past, consumers have raised no objection to higher prices, they being vastly more concerned with securing needed pulp supplies. Some consumers have informed Washington of their readiness to accept higher ceilings of wood pulp.

Revised Price Agreement is Needed

In the meantime, a few Canadian mills have curtailed pulp shipments at least temporarily, to destinations in the United States to which the freight charges exceeded those acceptable to producers. If a revised price agreement is not reached, the controversy may result in reduced production of wood pulp by dissatisfied pulp mills and, as this is a matter of vital importance, it is to be hoped that it will be straightened out without further delay. If not, and worst of all, partial disruption of our war efforts might be the consequence.

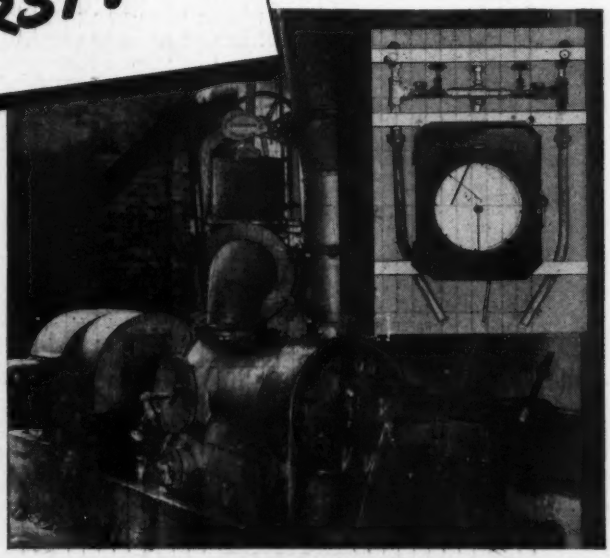
It is always easy to criticize business methods at any time and especially during wartime, but there is one phase of the present business situation which is



1. Here are four typical installations where Taylor Accuracy and "know how" are paying dividends. Above photo shows the Taylor Automatic Temperature Control system, chosen after comparative tests, for the first large installation of Roberts Grinders in the United States or Canada.

Four places where Taylor Instruments mean ACCURACY FIRST!

2. And out in Lawrence, Mass., a Taylor Calender Roll Pressure Indicator is assuring a consistently better product for the Champion-International Co. The Company says Taylor Accuracy "has materially reduced the replacement cost of intermediate rolls and materially improves the finish of the sheet."



3. Another paper manufacturer is getting maximum efficiency out of his new Dilts Classifiner with the aid of a Taylor Flex-O-Timer (not shown) which actuates the Saunders type reject valves at desired intervals by means of standard Taylor Motosteel Diaphragm motors.

4. And here's a Taylor Volumetric Load Recorder installed on a stock refiner that is helping maintain proper process pressures and a more uniform sheet. See your Taylor Field Engineer. He can now offer you *normal delivery schedules* on the Taylor instruments you need. Taylor Instrument Companies, Rochester, N. Y., or Toronto, Canada.

★ ★ ★ **BACK THE ATTACK — BUY EXTRA WAR BONDS** ★ ★ ★

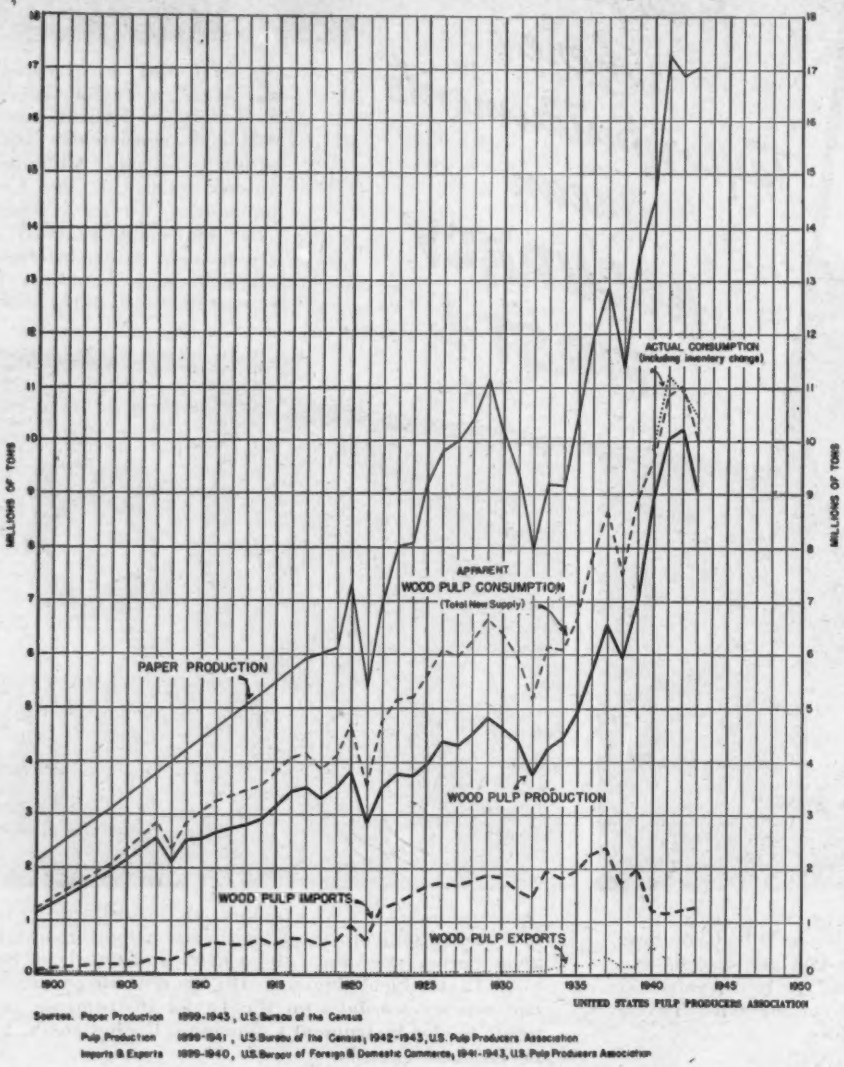
beyond criticism, and that is the prompt payment of bills. However, the war is not going to last forever, and the time surely will come when both creditmen and salesmen will again be called upon to exert themselves as they resume their important roles in the trade. For the present, they are persona non grata, more or less, with their firms, unless they happen to be in the service of Uncle Sam.

The technical side of pulpmaking probably did not receive the close scrutiny and attention in the mills as in peace time, except perhaps in isolated instances, but after the war this country as well as others, will, as never before, depend on the ingenuity of technical men, production experts and skilled workmen to keep pulp mills on a competitive basis. In cases where they may fail to do so, mills are doomed to oblivion, regardless of their financial status, and while money will talk and probably louder than ever before, only those mills that will be on a competitive basis will weather the storm and continue to operate.

Wood Pulp an Essential Material

Wood pulp is one of the most essential raw materials in the world today, and is now being utilized for numerous products outside of the paper industry. It goes into the manufacture of rayon, explosives, shell cases, multi-wall sacks, maps for both military and civilian use, paper manufacture for plastic impregnation, hospital dressings, photographic materials, greaseproof wrappings for foods, and almost countless other articles. Without wood pulp the United Nations' armed forces might not have had sufficient smokeless powder to defend themselves from the enemies, but an American firm has developed a process for making this powder of cellulose from wood pulp and cotton linters and by so doing undoubtedly averted a serious shortage of smokeless powder. It is understood the use of wood pulp as a raw material in the manufacture of smokeless powder has increased production of that highly necessary war material by about 25%, and simultaneously reduced the cost of manufacture by millions of dollars per year.

Among other interesting by-products of wood pulp is alcohol, from which the Swedes, Norwegians and probably other peoples are making their famous "Aquavit" (a drink used instead of cocktails with the smorgasbord); imitation leather, laquers, glycerine, sugar, molasses, yeast and food proteins. The Swedes are feeding their cattle a kind of doctored up wood pulp. But the most startling invention is a cellulose beef, served in the Swedish restaurants, and which is reputed to be a remarkable substitute for meat. The Swedes also have their wood pulp sausages, and are said to thrive on them.



TOTAL UNITED STATES PRODUCTION OF WOOD PULP AND PAPER, AND APPARENT CONSUMPTION, IMPORTS AND EXPORTS OF WOOD PULP.

Before the war, the so-called converting paper and board mills in the United States were to a large extent dependent for their supplies of high grade sulphite and kraft pulp from Sweden, Finland, Norway and the Continent of Europe, and Canada. Most of the balance of their requirements was supplied by domestic pulp mills situated in various sections of the United States.

When the European sources of supply were cut off by the war, pulp manufacturers on the North American Continent were called upon to fill the gap. Thus far they have done remarkably well, taking everything into consideration. Especially may this be said to do so as regards Canadian mills. During 1943 Canada more than doubled, in the aggregate, its pre-war ex-

It has to be *Right*

Alone in his "office" in the skies, the navigator makes his observations, consults his tables, plots his position. Just a line—a simple line—marks the course. But *it has to be right* . . . the success of an important mission, the return of a bomber and its crew depend on its accuracy.

Columbia chemicals have to be right, too. Frequently they are used in operations involving the conversion of raw materials. In other cases they may enter into only one phase of a complicated manufacturing process, and pass off when their task is completed. But always they must be of a standard that assures the correct form and quality of the finished product.

This is why Columbia exercises infinite care in supplying chemicals which conform to the precise needs of its customers.

PITTSBURGH PLATE GLASS COMPANY
COLUMBIA CHEMICAL DIVISION
GRANT BUILDING, PITTSBURGH (19), PENNSYLVANIA

Chicago • • • Boston • • • St. Louis • • • Pittsburgh • • • New York • • • Cincinnati
Cleveland • • • Minneapolis • • • Philadelphia • • • Charlotte

COLUMBIA SPOTLIGHT

DEEPEST LIMESTONE MINE in the world—2323 feet—was sunk last year by Columbia less than two miles from its plant at Barberton, Ohio. Among its many unique features is semi-automatic hoisting which attains top speed of 2,000 feet per minute.

THE NATION is facing a highly critical situation in domestic freight transportation, the O. D. T. warns in a plea for the cooperation of every shipper. Be sure your shipping and receiving departments understand that the handling of railway equipment with all possible speed is vitally important to our war effort.

NOW IT CAN BE TOLD..the largest Chlorine-Caustic Soda plant built as a single unit east of the Rockies—a Defense Plant Corporation project—is being operated by Columbia at Natrium, W. Va.

A REVISED EDITION of Columbia's Products Booklet is now ready for distribution. A handy reference of products, grades, package units, uses of all Columbia products. Write for free copies.

WHEN THE NATION'S rubber production no longer requires all of Columbia's production of SILENE EF, this extraordinary pigment will find its way into an amazing variety of products. To name but a few—paints, tooth powders, deodorant creams, face powders. New uses are being discovered constantly. If you'd like to turn your own laboratories loose on SILENE EF, data and samples are available on request.

COLUMBIA CHEMICALS

Soda Ash • Caustic Soda • Liquid Chlorine • Sodium Bicarbonate • Silene EF (Hydrated Calcium Silicate) • Calcium Chloride
Soda Briquettes • Modified Sodas • Caustic Ash • Calcium Hypochlorite • Phosflake • Calcene (Precipitated Calcium Carbonate)

portations of chemical wood pulp. Had it not been for our resourceful and cooperative northern neighbors, who strained their facilities to the limit to supply not only the United States but the United Kingdom and other countries with large quantities of wood pulp, chaos would have reigned in the paper industry today. This they did under most trying pulp wood and labor conditions, and they should be highly complimented by everyone in the wood pulp and allied industries on this side of the border and elsewhere on their marvelous achivement, and much appreciated contribution to the war effort.

How they accomplished it, really doesn't matter, since what actually counts immeasurably is what they have done, and are still doing. Aside from the immense tonnage provided for export, the quality furnished by a majority of the mills not only was maintained, but in some cases improved to a degree where the pulp was successfully employed in the manufacture of glassine and other high grade papers.

Canadian and U. S. Grades Well Established

Such Canadian and American grades are now so well established in the industry that they are here to stay, in any event as long as they can meet price competition when competition returns. They may even enjoy an edge in the market by token of speedy and convenient deliveries in carload lots on short notice for tonnage required in a hurry.

However, it does not appear to be reasonable to believe that northern European wood pulp will be excluded in the market here, in the United Kingdom or in other markets. That is entirely unlikely while democracy prevails and the axiom of live and let live is a part of its doctrine and which, according to the Atlantic Charter, is regarded as an essential element thereof.

Splendid opportunities still exist for other North American pulp mills to reinforce themselves for the competitive battle to come, and to retain the business they now have, by improving their product. This is the kind of post-war preparedness everybody should favor, and which I have advocated in my annual wood pulp reviews for a decade or longer. During the last ten years many mechanical improvements have been made in pulp mills everywhere, as well as in the technique of pulpmaking, and mills on the Pacific Coast appear to have made the longest strides in this connection and today fear no competition from any source.

Many years ago, when Pacific Coast pulp was in its infancy, a leading eastern paper manufacturer made the statement, after having tried several grades of Pacific Coast unbleached and bleached sulphite, that pulp from the West Coast would never equal the best imported brands. I mentioned this to a prominent West Coast pulp pioneer, and his crisp retort was: "Anything the Swedes can do, we can do." I leave it to anyone familiar with pulp and papermaking to judge for himself concerning my western friend's assertion. Great progress has been made out there and, as they are still ascending slowly and cautiously, there seems no chance for a serious slip in the future. Their pulp is very popular and has exerted great influence in the eastern and other markets in recent years.

The keynote to the success of the Pacific Coast mills was and is their determination to concentrate their efforts on quality, first, last and all the time. Today, they can be justly proud of their achievements from which the entire nation has reaped much benefit.

When the question of quality arises, the relative merits of American, Canadian and Scandinavian pulpwood are always brought up. In general terms, the following seem to be the case: In the North of the United States (not including the Rockies and Pacific Coast regions) there are approximately 12 species of coniferous trees, such as jack pine, balsam, fir, etc., and the color and strength of the best compare favorably with the Scandinavian pine and spruce from which pulp of high quality is produced. In the southern States, so-called southern pine is largely used in the manufacture of kraft pulp. It is a fast growing and very resinous tree, and is not considered as suitable for the manufacture of sulphite pulp as the northern pulpwood. The Pacific Coast and Canadian wood is excellent, comparing favorably with Scandinavian and New England wood for pulpmaking.

Although the manpower and pulpwood shortages affected the mills on the West Coast, as well as in other localities of the United States and Canada, to the extent of reducing pulp production somewhat, this condition improved toward the end of 1943, as attested to by the fact that the large kraft mill at Tacoma, Washington, will resume operation as soon as sufficient pulpwood supply has been accumulated and necessary repairs made.

All Cooperating to Keep Mills Running

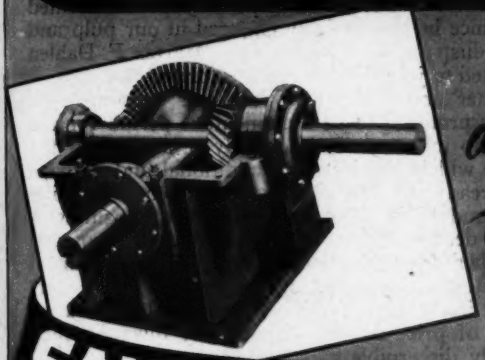
It is recognized that pulpwood interests in the United States and in Canada, in conjunction with the Governments, are doing their part as far as feasible to prevent the closing down of any pulp mill for lack of wood. Moreover, it is gratifying to observe that the disturbing pulpwood situation is on the mend. Our Canadian friends were jittery for a spell because they actually faced an acute pulpwood and labor shortage and felt that unless increased manpower was promptly mustered for wood cutting, it was entirely probable that sufficient quantities of pulpwood would not become available to cover the year's requirements, based on the current production of wood pulp and paper. But they were not alone in this perplexity as it was generally conceded that consumption of fibrous materials by the paper and allied industries exceeded new supplies, thus leading to a dangerous reduction in inventories. Present inventory levels are seriously low, and since the primary problem of the wood pulp industry continues to be the shortage of pulpwood, strenuous efforts must necessarily continue to be made to increase pulpwood cutting and to conserve wood pulp, waste paper and other raw materials for papermaking.

Monthly allocations of wood pulp during 1943 were determined from statements of requirements by consumers coupled with their reports of estimated consumption in terms of end-use categories. Prisoners of war were used to some extent to facilitate deliveries of pulpwood, and the further use of such labor for getting out wood is apparently likely. In addition, Canadian pulp and paper concerns financed a Dominion-wide publicity campaign for increasing pulpwood supplies, which was productive of gratifying results. The Canadians also employed a rather large number of canvassers to negotiate with rural workers for pulpwood cutting and loggings, emphasizing their appeal with the slogan "Work in the woods this Winter and return to your farm next Spring."

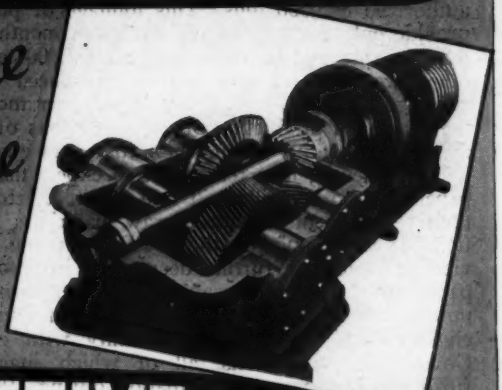
In the United States similar drives were inaugu-

WINNING A WAR TAKES REAL DRIVE

WAR-TIME PRODUCTION TAKES REAL DRIVES!



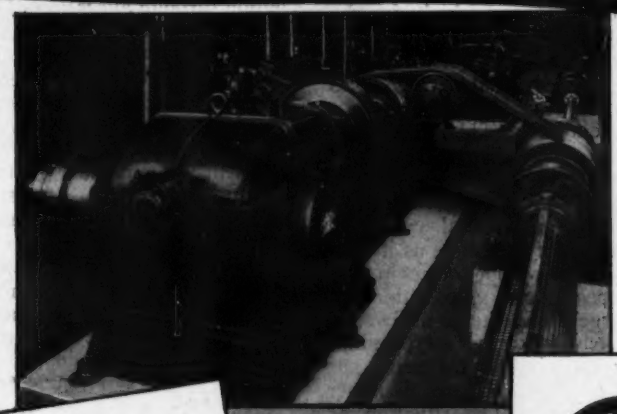
and here they are!



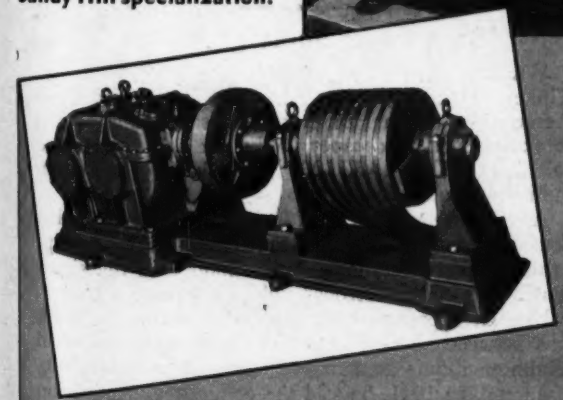
SANDY HILL SELECTIVE DRIVES

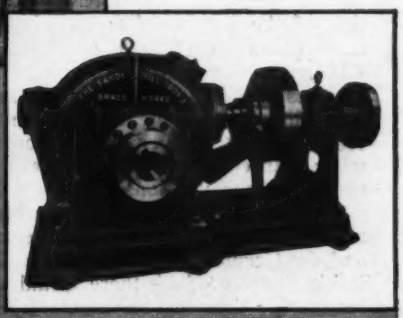
Drives rank 5th among 150 items that paper and pulp mills plan to install in the first year after the war ends, according to an important trade survey.

Sandy Hill has already received more than 20 orders and inquiries for post-war delivery for DRIVES — always a Sandy Hill specialization.



Now is the time to consult Sandy Hill's engineering staff on your post-war expansion plans, and your present need for uninterrupted operation.





Sandy Hill
IRON & BRASS WORKS
HUDSON FALLS, N. Y.

PULP & PAPER MAKING MACHINERY SPECIALISTS

rated, and the Victory Campaign sponsored by the American Newspaper Publishers Association to "cut a cord of wood for every boy in the service" met with excellent results. However, in spite of these and other efforts, receipts of pulpwood by American wood pulp and paper manufacturers showed a substantial decrease at the end of the year, possibly about 10% below 1942 or approximately 1,700,000 cords, equivalent to about 900,000 tons of chemical pulp.

Wood Pulp Supply Short This Year

Based on the proposed average monthly paper and board production in the United States of 1,534,000 tons for the first quarter of 1944, approximately 997,700 tons of wood pulp will be required per month, of which the Forest Products Bureau of the WPB has authorized 865,000 tons. This tonnage of pulp will provide only for an average minimum monthly output of paper and board of about 1,397,000 tons. In other words, the paper industry is faced with a shortage of 40,000 tons of wood pulp per month on the scheduled production of 1,534,000 tons of paper and board monthly during the initial 1944 quarter.

Consequently, it is reasonable to expect that some paper and board mills will find it difficult to cover their requirements of fibrous raw materials. Allocations of wood pulp by the WPB are made with a view to avoiding a further decrease in inventories of paper and board mills manufacturing essential military products, and to adjust inventories for essential civilian requirements, in conformity with existing Government regulations, all of which suggests a further reviewing of the situation during 1943 and an application of the findings therefrom toward alleviation of a pulp shortage in 1944. This, in turn, points to the necessity of importing pulpwood and wood pulp from any available source, which, for the time being, is Canada solely.

As we evidently must depend on Canada for a generous supply of these raw materials, it behooves us to assist Canada to carry out this all-important assignment to the fullest extent possible, even to a point of favoring advanced prices whenever deemed necessary to insure maximum imports of these commodities. The immense importance of this matter requires, in my estimation, no additional comment. There is, of course, the possibility—remote as it may appear at the moment—of the reappearance in this market of northern European wood pulp within the not too distant future. Large shipments from Sweden can be expected, immediately following the termination of the war, or the reopening of the usual sea lanes because the Swedish pulp mills are all intact and ready for this contingency. The situation as respects Norwegian and Finnish mills is, of course, more difficult to judge, but they also will endeavor to regain a part of their former business in this and other markets, and they will, perhaps, require some time for rehabilitation.

Assuming that the European war ends in 1944, concerning which odds are momentarily in its favor, and the German blockades of the North Sea and the Baltic Sea are lifted, there would, apparently, be no reason for delaying shipments from Sweden. Also, Norway and Finland might be better situated than present reports would indicate and may join in the scramble for trade without undue delay. Well, let's hope so, anyway. It seems extremely doubtful that any of these countries will or can resort to price cutting to reenter the American market because their costs of manufacturing must have mounted substantially. In any event, any such procedure would not only be unwise on their part but would meet with strenuous opposition from pulp manufacturers on the North American Continent.

While on this topic, it is fitting to refer to the recent arrival on this Continent of the Swedish Trade Delegation, sent by the General Export Association of Sweden and the Association of Swedish Industries, to consult with American and Canadian importers and exporters regarding possibilities of a resumption of trade relations after the war. The delegation is headed by Rolf de Heidenstam, and other members are Rudolf Molin, Hilding Tornebohm, Sune Schele, S. L. Wahlstrom, Bo Hoeglund and Goesta Hall, the last named being well known in wood pulp circles throughout the world and especially in the United States since he was actively engaged in our pulp and paper industry about 15 years ago. Marten F. Dahlen is expected to join the delegation shortly.

Whether or not the European war ends in 1944, this year promises to be a momentous period for the wood pulp industry. It is entirely probable that the industry will be subjected to additional and perhaps drastic readjustments, in order that it may function on a sound basis. The total volume of business is likely to decline another 10% or more. It is possible that higher costs of manufacturing, urgent demand and continued shortage of pulp wood will exert sufficient influence in proper quarters to lead to a relaxation of price controls, a tendency toward which is already discernible.

Sooner or later, every paper and board mill in the United States will be detrimentally affected by the wood pulp shortage, and it is to be expected therefore that the W.P.B. will tighten its control of distribution through allocation of available tonnage. Surely under the circumstances no relaxation pertaining to this phase of the situation can be anticipated.

Meanwhile, strict adherence by all within the pulp and paper industry to existing Government wartime regulations is imperative. What those interested firms in other countries may do with respect to these Government measures is a matter of conjecture and their actions may of course be subject to further negotiations between our Government and theirs. However, hearty cooperation can be expected, because there is mutual interest and desire to bring the "Big job on hand" to a satisfactory conclusion at the earliest possible moment. This reminds me of what Benjamin Franklin once said: "We must all hang together, or most assuredly we shall hang separately."

Says Paper Shortage Grows

WASHINGTON, D. C., February 14, 1944—E. W. Tinker, secretary of the American Paper and Pulp Association, told a House military subcommittee last week that estimated paper production this year would fall 2,500,000 to 3,500,000 tons short of essential minimum requirements.

Advocating enactment of legislation to give blanket draft deferment to men engaged in timber or pulpwood logging operations, Mr. Tinker said the situation would be "disastrous" unless Congress acted.

Estimated paper production this year, he declared, was between 13 and 14 million tons, while essential minimum requirements were expected to be 16,500,000 tons. In 1941, he told the committee, production was 17,300,000 tons.

Your cooperation in prompt car unloading will be a real contribution to a hastened Victory. Transportation facilities in this country are taxed to the utmost—the railroads, the trainmen are exerting every effort to extract from rolling stock the greatest efficiency. As never before freight cars must do double and even triple duty. Mr. Executive, this is a genuine problem demanding your serious consideration. If our Country's war program is to be sustained, transportation facilities must be expanded through expediting every carrier.

THE NORTHWEST PAPER COMPANY

MILLS AT CLOQUET AND BRAINERD, MINNESOTA

Supply of Labor to Cut Enough Pulpwood Was Canada's Big Problem In 1943

By C. L. Sibley, Regular Correspondent, PAPER TRADE JOURNAL

The past year has been the strangest and most anxious year in the history of the pulp and paper industry of Canada. It has been a year in which the industry has seen large numbers of its trained personnel and seasonal labor diverted to war work in other industries and at the same time a huge and ever-increasing proportion of its products diverted to purely war purposes. On top of this—believe it, or not—it has been a year in which the leaders of the industry have felt impelled to put on a special campaign to convince the governmental authorities of the "war essentiality" of the industry. But that is not all. Due to the fact that Canada is the main, and in many instances the sole, source of supply of newsprint for the United Nations, it has been faced on the one hand with an unprecedented demand for newsprint and on the other hand with such prospectively severe governmental demands for restriction of the output of that commodity as to endanger its good relations with its American customers and seriously to threaten the future of its position as Canada's premier peacetime exporting industry.

Here are the two basic problems which worried the industry during most of 1943: (1) the estimate, substantiated by a careful survey, and concurred in by government officials, that due to labor shortage there would be a shortage in the cut of pulpwood of 1,250,000 cords, which, added to the shortage in the previous cutting season of 500,000 cords, meant a cumulative total shortage of 1,750,000 cords, or 20% of all wood cut at current rates of consumption; (2), a wholly unrealistic official view of huge savings that could be made in newsprint consumption.

The Pulpwood Situation

What the government, in its vast engrossment with military problems, appears to have overlooked in respect to the first of these problems, is that the replenishing of stock piles of pulpwood is not a matter which can be undertaken at any moment when labor becomes available, but that it is a strictly seasonal operation, and that if one cutting season is missed, and mills run out of raw material thereby, it takes them a full year again to get into operation. Paul Kellogg, acting president of the Newsprint Association of Canada, put the matter this way:

"Widespread opinion was that huge savings could be made in newsprint consumption; most of the estimates were extravagant and wholly unrealistic. Shipments to the United States were on the annual basis of 2,520,000 tons, a cut of over 500,000 tons or 17.5% as compared with the base period used for government control purposes. That base period is October 1, 1941, to March 31, 1942.

"The industry was already aware that this American market must be considered in the light of something additional to cold figures. American publishers were already having difficulty adapting themselves to a 10% cut in supplies. There was constant difficulty in adjusting the total volume of newsprint ordered by U.S. customers to the total Canada agreed to supply. In some uninformed quarters south of the border there were murmurings accusing Canadian producers of a pulp and paper 'squeeze.' This last development was considered perilous to prospects of the industry holding its American markets once European mills resumed competition in the post-war period. The experience of the last post-war period was recalled.

"Considering the matter from all angles, the industry concluded that everything possible should be done to prevent a further reduction in American newsprint supplies.

"What could be curtailed in pulps? The American demand was greater than ever. With European sources cut off, the Americans using large quantities of pulp in war materials, and Canada the sole hope of quantity supply, Canadian mills must look forward to shipping almost 1,500,000 tons more than in 1940. Britain's pulp consumption, at about 20% of pre-war rate, was held to be irreducible. Australia's purchases were at a minimum. 'All others' were due to get a mere 28,000 tons of pulp; and that included Latin-American countries, in which Canadians had been urged to develop business in line with Canada's 'good neighbor' policy. It was clear that further curtailments of pulps would be commercially imprudent; that, on the whole, no defensible additional curtailment could meet the shortage of between 1,250,000 and 1,750,000 cords of pulpwood.

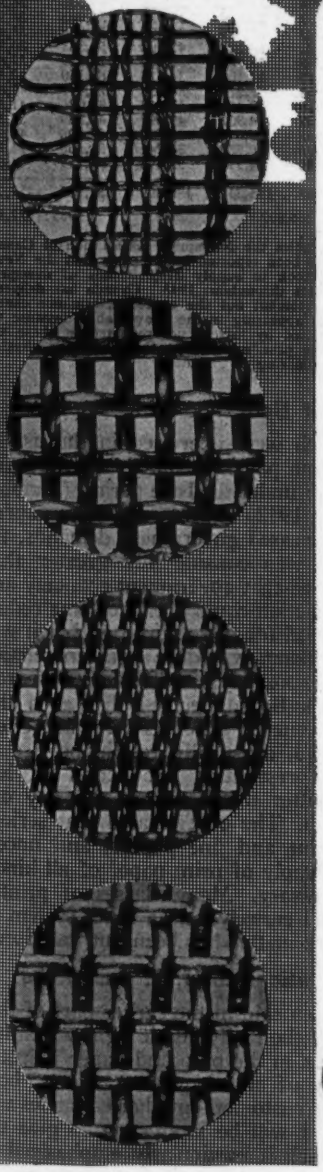
"The industry has to plan two years ahead. What men cut in the woods this winter will be piled on the banks of the stream during the winter, and in the spring freshets of 1944 most of it will come down the rivers to the mills where, during the summer of 1944, it will be taken from the streams and put on the block piles. These block piles must be sufficiently large to take care of the manufacturing requirements of the mill until May or June of 1945. If pulpwood is not cut this winter, paper cannot be produced in the early part of 1945. By 1945, according to Churchill, the European war will be over. As far as that theatre is concerned, the post-war period will be upon us. The pulp and paper industry has to view that period now and has to prepare for it this winter. There is no doubt in my mind that it has an appreciation of its destiny in the post-war economy as the chief source of immediate exchange for the country. Post-war demand for pulp and paper will be enormous for at least the first several years. Rightly or wrongly, if the customers of the industry find that they cannot get what they want from Canadian manufacturers, harm will be done to that fragile hot-house flower which the industry has nurtured—goodwill."

A Campaign That Produced Results

It was under these circumstances that the pulp and paper industry undertook to prove to the government the "essentiality" of the industry, supporting their claims with an exhaustive brief fully analyzing the situation and bearing out their contentions. The demand was for release of men from other work for woods operations and the use of some 20,000 internees or prisoners of war for woods cutting operations.

The campaign met with a measurable degree of

Microscopic IMPROVEMENT LEADS TO *Major* PROGRESS



IT HAS often been pointed out that the finest things in life are unseen by the unaided eye. This is true of science and industry. It is true of Fourdrinier wires.

The advances in wire cloth excellence are not of the apparent variety. Typical are the marked developments which have taken place in seams and selvedges, as well as in the quality of the wire itself. These are among the finer phases of manufacture — phases that can be carried forward only by unremitting application under the microscope. But the overt progress made possible by such minute care has been both great and practical, not only in the quality of wire cloth, but also in that of the paper that results.

All this goes back to *research*. Nor can you start and stop. If improvement in any product is to be constant, the research behind it must likewise be continuous. The Lindsay policy calls for just such a record of steady product improvement, to be widened as conditions permit.

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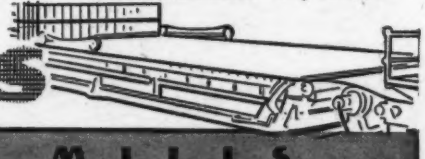

FOR PAPER MILLS

success. Woods labor was moved from Category C to Category B in labor priority schedules, military postponement rules and Selective Service regulations were clarified and simplified, the Department of Labor undertook a promotional campaign to draw seasonal workers to the woods, and the Government put an unspecified number of internees and prisoners of war at work in the lumber camps. In addition, the industry itself conducted an intensive publicity campaign to attract farmers and farm workers to pulpwood cutting during the winter.

The net result to date has been a relatively rapid improvement in the wood supply outlook, though it is impossible yet to estimate the extent to which the threatened shortage of pulpwood will be averted. However, it was possible late in December to announce production and supply schedules for the first six months of the present year under which approximately the same production as in 1943 would be maintained, with a reallotment of shipments by which a small increase would be shipped overseas. To make the latter possible, shipments to the United States will be at the rate of 200,000 tons a month instead of 210,000 and to Canadian publishers 15,400 tons a month instead of 16,000. The Prices Board announced that the increased supplies for overseas consumption were due to the changing needs caused by war developments, and were made in response to urgent requests from United Kingdom and other Empire consumers for additional supplies of Canadian newsprint. Shipments to the United Kingdom during the first half of 1943 were at the rate of 18,844 tons a month.

The Prices Board further announced that pulp shipments to the United States during the first six months of 1944 would be at the annual rate of 1,100,000 tons, or 91,666 tons a month, as compared with indicated 1943 shipments of 1,280,000 tons and with about 600,000 tons annually in pre-war years. The particular distribution of pulp shipments between all kinds and grades of pulp will be the subject of further discussions with the War Production Board, and the whole question of newsprint and pulp shipments will be reviewed in the light of actual production figures for the cutting season when these figures become available about the end of April.

Newsprint Production in 1943

Production of newsprint in 1943 amounted to 2,982,797 tons, as compared with 3,177,102 tons in 1942 and 3,427,865 tons in 1941. The production ratio for the year was 67.8% of capacity, as against 72.2% in 1942 and 78.9% in 1941. While this falling off in the production from the war peak of the two previous years occurred, the 1943 production showed an increase over that in the largely pre-war year of 1939 of 4%. Shipments from Canadian mills were as follows:

TO CANADA

	1943	1942	1941	1940	1939
January	15,435	17,702	14,591	13,541	14,865
February	14,584	15,487	14,207	15,223	13,582
March	16,084	18,703	16,225	15,418	15,992
April	16,927	16,805	16,957	15,793	16,371
May	16,247	17,201	17,011	12,383	15,434
June	16,157	16,672	16,145	16,496	16,155
July	15,077	16,649	16,024	15,809	15,296
August	16,376	15,433	15,584	15,977	14,413
September	16,818	16,614	16,364	15,255	16,443
October	15,801	17,700	18,792	16,442	18,702
November	16,621	16,819	19,508	15,855	15,657
December	16,693	16,751	15,358	15,702	16,572
Total	192,820	202,536	196,766	183,894	189,482

12 Months Totals—1943: 192,820 1939: 189,482

TO UNITED STATES

	1943	1942	1941	1940	1939
January	189,676	257,476	192,144	190,096	160,657
February	193,042	227,925	185,618	164,296	140,106
March	215,162	266,034	212,727	186,788	155,642
April	204,265	209,419	226,830	196,956	177,328
May	217,660	230,496	241,437	248,229	201,503
June	228,123	225,510	231,583	253,390	173,760
July	239,391	201,756	233,159	249,252	158,770
August	222,500	222,634	230,284	232,231	168,645
September	204,237	260,859	238,949	218,989	213,219
October	219,828	268,329	247,231	213,705	220,595
November	219,873	227,736	261,611	219,524	220,469
December	196,002	212,665	268,429	220,996	203,432
Total	2,549,759	2,810,839	2,770,002	2,594,452	2,194,126

12 Months Totals—1943: 2,549,759 1939: 2,194,126

TO OVERSEAS

	1943	1942	1941	1940	1939
January	9,904	16,820	36,659	40,636	26,330
February	14,757	21,209	39,920	31,803	24,548
March	17,223	23,429	36,772	33,098	33,465
April	22,621	12,122	42,002	54,385	20,556
May	23,849	18,746	32,664	73,829	57,698
June	24,710	11,101	34,115	68,560	42,346
July	29,748	25,215	51,053	72,447	47,677
August	21,916	17,496	51,117	84,026	41,309
September	23,538	14,932	49,697	49,889	37,343
October	25,965	9,596	38,662	57,796	49,963
November	24,096	10,532	39,741	51,360	51,743
December	28,480	14,114	35,495	39,759	44,616
Total	266,807	195,312	487,897	657,588	477,594

12 Months Totals—1943: 266,807 1939: 477,594

In supplying the above tables the Newsprint Association of Canada appended this note: "It has been reported in the press that the Newsprint Administration undertook to supply 210,000 tons of newsprint monthly to the United States throughout 1943. Canada has delivered full measure under this agreement but the exact performance cannot be measured by the figures appearing in the above tables because the undertaking is largely affected by factors not reflected in these statistics. Our data, as in the past, continue to show only the physical movement of newsprint originating in Canada."

Curtailment of Book and Fine Papers

The controls which were exercised in the use of book, writing and fine papers resulted in production in 1943 of about 14% under the base period (October 1, 1941, to March 31, 1942) in the use of these papers, but owing to the increased government demands, the civilian curtailment was considerably greater than 14%. It was estimated that government economy and further civilian restriction could produce some reduction in the use of wood for these purposes, but it was conceded that the amount would be small in relation to the total problem—possibly 35,000 to 45,000 cords. However, the Prices Board decided that even this was desirable. Consequently an order went into effect on December 1, 1943, drastically restricting use of printed matter and restricting production of less essential printed matter to 25 pounds for any one person in any month. The order stated that serious shortage in newsprint and fine papers, and uncertainty of potential supply of print paper of all kinds, made this step necessary. Many classes of printed matter are prohibited entirely, and a strict system of permits for allowable matter has been put into force.

Canada's Obligations to U. S. Customers

From what has been said in the earlier part of this review, some idea of the really heroic fight which has been made by leaders in the pulp and paper industry to assure continuity of an adequate supply of both pulp and paper to its customers in other countries will be gathered. Here it will be interesting to give the facts and views which it particularly emphasized in combating further curtailment of newsprint exports to the United States. These facts and views, which were marshalled in its brief to prove to governmental authorities the "essentiality" of the industry, were stated as follows:

"(a) United States publishers have had great difficulty adapting their operations to a moderate 10% cut in consumption, required to adjust their use of news-

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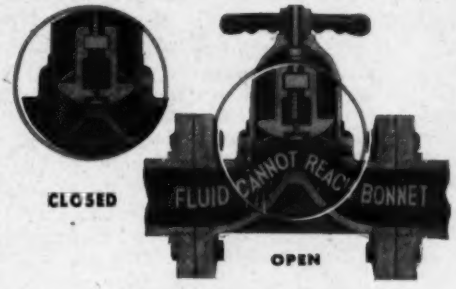

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recommend Grinnell-Saunders Diaphragm Valves for services handling viscous or corrosive fluids, or suspended solids.

1. Working parts completely isolated from the fluid. No sticking, corroding or clogging to interfere with easy operation and tight closure. No contamination from valve lubricants.
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AVAILABLE IN SPECIAL TYPES
The "quick operating" lever design is one of several special types described in Catalog 1-S.
Screwed or Flanged Patterns

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WHENEVER **PIPING** IS INVOLVED

print to the curtailed production rate of newsprint manufacture now in effect. The industry is at this moment confronted with a serious problem resulting from the inability of WPB to reconcile its orders with those of the Canadian WPTB.

"(b) The odium resulting from any substantial cut will fall on Canada, particularly as the United States has declared the cutting of pulpwood an essential industry. Practical experience has taught the industry that the effects of this will be far reaching and long lasting.

"(c) Should newsprint supplies (mainly the responsibility of Canada) be cut more deeply and magazine paper in the United States (entirely the responsibility of the U. S. mills) be left comparatively untouched, the "odium" mentioned above will be accentuated.

"(d) Reducing current newsprint operations will involve substantial increases in Canadian production costs. Suppose, for instance, a radical reduction in newsprint production was made, resulting in an operating rate of 50% against the present rate of 65%. This reduction would involve an increase of between $7.50 and $9.00 per ton. In view of the present unsatisfactory cost-selling price position of the industry, such increases obviously would have to be passed on to the consumer.

"(e) Reducing current operations from roughly 65% of capacity to 50% would have serious effects on many mills and many mill communities where newsprint is the only source of income for the vast majority of the citizens. Even this reduction, however, would not solve the pulpwood problem. At most it would effect a saving of some 650,000 cords or roughly half the total shortage the industry is at present facing.

"(f) Pulp exports have a high degree of essentiality. This raises the question whether the whole curtailment should be in newsprint shipments.

"Consider the situation that would arise if the entire shortage contemplated were taken out of newsprint shipments to the United States. This reduction of 1,500,000 tons in annual shipments would reduce our deliveries by 60%. As it is illogical to assume that such a catastrophic reduction in our production would not be reflected in equal shortages in U. S. production, we can then contemplate a reduction in newsprint supply to the U. S. press of 60% below present already reduced quantities. At present newsprint shipments are at 82.5% of base period level. A further 60% cut would reduce them to 33% of this level.

"This is revolutionary in its prospects. Not only is this level within a small percentage of the irreducible minimum established in the United Kingdom as a consequence of the extreme difficulties of shipping, but from this amount must come further tonnage to supply the necessary overseas expansion.

"The clamour that would arise as a result of this cut would certainly be describable conservatively as an international issue. If Canada has to do this (or make any substantial cut additional to existing curtailments) after taking all possible steps to prevent it which an enraged press could uncover, it would be bad enough. But if Canada fails in any of these steps, and in particular if the Government fails to support the industry in its own efforts to avert the disaster by the constructive means proposed, then indeed will Canada's greatest industry be irretrievably damaged in its most important market."

Canada's Backbone in Post-War Years

One result of all the discussions which have taken place regarding the newsprint situation has been to throw a great flood of light on the important place which the pulp and paper industry will occupy in the trade of this country immediately following the war. Now that the war is regarded as entering its final phases, particular attention is being given to post-war problems, and it is coming to be recognized that the pulp and paper industry will be the backbone of the country's post-war development, just as in the past generation it has been the mainstay of Canada in its world trade.

In recent Census of Industry report, Dr. R. H. Coats, former Dominion Statistician, makes these statements:

"The manufacture of pulp and paper has been consistently one of the most important industries in Canada during the last 25 years . . . (It) has headed the lists in net value of production since 1920; and in wage and salary distribution since 1922, replacing the sawmills in both cases . . . Total capital invested (1941)—$678,937,841 . . . Total output 6,112,807 tons, value $334,746,199 . . . Excess of exports over imports (higher than any other industry) $234,254,085 (1940) . . . From the standpoint of sustaining balance of trade . . . the pulp and paper industry has become the chief contributor."

This Industry is the largest single industry employer of labour in Canada, providing even in peacetime a direct livelihood for over 500,000 people, including many thousands now serving in the Armed Forces who have been guaranteed their jobs on their return. The mills, located mainly in isolated places, are the sole support of the contiguous communities.

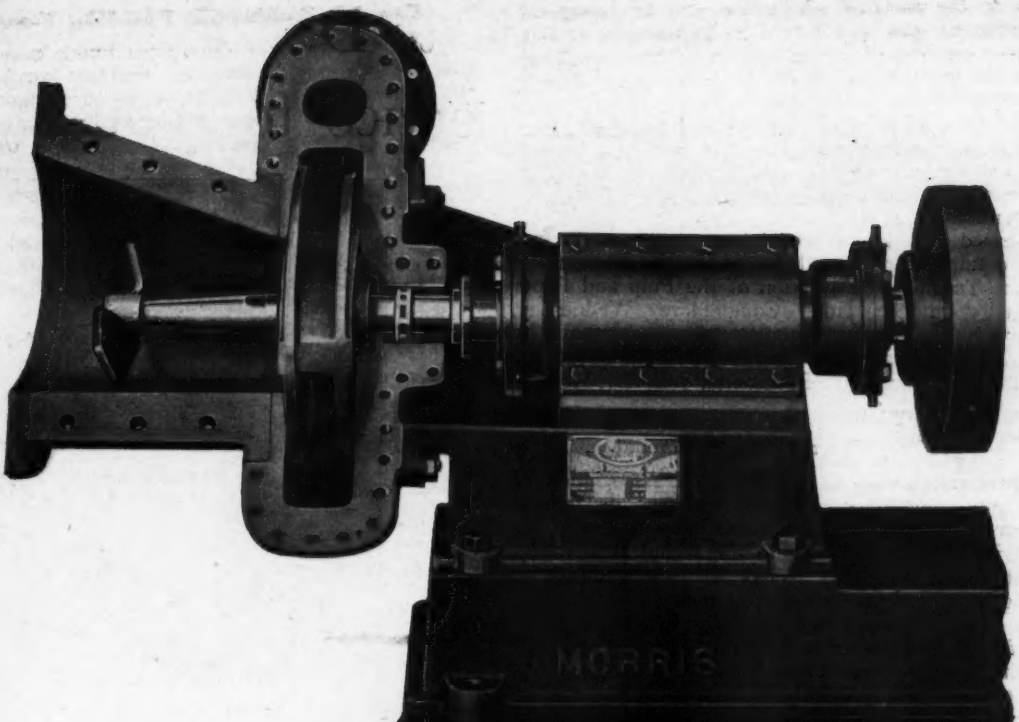
Beyond this, its contributions to the economic well-being of the entire country are widespread. Some outstanding annual disbursements are:—

Food Supplies	$ 7,000,000
Fuel	13,000,000
Chemicals	14,000,000
Pulpwood, from Farmers and Settlers	18,000,000
Hydro-electric Power	20,000,000
Taxes	30,000,000
Transportation—direct payments only	60,000,000

Today 55% of the pulpwood for manufacture into pulp and paper in Canada goes into products other than newsprint, yet to the man in the street the industry is still newsprint. The war has resulted in the use of wood pulp as a base for a marvellous variety of new uses and new materials, and a field of almost limitless possibilities is just opening up in pulp-based plastics. In connection with the exploitation of these new fields Canada is exceptionally well equipped from a scientific and technological point of view, for it has at its command probably the greatest aggregation of experts of any industry in the country—a body of men gathered and trained through the years both by individual companies and collectively by the industry as a whole and by and in conjunction with the Government's and universities' laboratory and research departments.

Power Development

The vital connection between the pulp and paper industry and the hydro-electric industry makes a review of the latter apropos. During the year 1943 new hydro-electric power installations totalled 1,002,273 horse power, bringing Canada's total hydro development to 10,034,513 h.p., of which more than 56 per cent is in Quebec province.



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This unit . . . the MORRIS ST-P Stock Pump . . . is GUARANTEED to handle raw waste paper stock, rag stock, or long-fibre stock without air-binding or clogging.

Users also find that these MORRIS Pumps operate noiselessly and without pulsation of flow, have reserve capacity, do not hydrate, and keep the stock clean.

Before buying your next pump, be sure to investigate Morris designs . . . a type for every pulp and paper mill process based on eighty years of experience in specializing on centrifugal pumps for the "hard-to-handle" service.

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MORRIS ST-P STOCK PUMP

TAPPI Presents Medal to D. Clark Everest For Outstanding Service to Industry

David Clark Everest, prominently connected for a long number of years with the paper business, was presented with a gold medal for outstanding service to the pulp and paper industry at the annual luncheon of the Technical Association of the Pulp and Paper Industry at the Hotel Commodore, Wednesday, February 16. The presentation speech was made by Dr. Allen Abrams, in charge of research at the Marathon Paper Mills, Rothschild, Wis. Dr. Abrams spoke as follows:—

Allen Abrams Presents Medal

On select occasions the Technical Association of the Pulp and Paper Industry bestows its highest honor, a gold medal, upon some individual who has contributed conspicuously to the technical advancement of the industry. Today we have gathered to recognize the first nontechnical man to receive this award, yet a man so well known and so esteemed by his fellows that he could rightfully be called the dean of the group—David Clark Everest.

Because he was called on to support his mother and sister just after he had finished high school, Everest had no opportunity for formal studies; yet in the years since then he has by personal application become one of the best educated men in the country. Only an attentive and acquisitive mind could have developed a person who can talk with equal facility on timber and pheasants, pulp and grandchildren, old coins and wage incentives, pH and balance sheets.

The medalist has an alert sense of values which led him, as office boy with a paper company in 1900, to purchase a few bales of waste paper which he believed to be of historical importance. In the succeeding years he extracted gold nuggets from those bales in the form of documents and letters bearthe messages and signatures of many of the great men of the early colonial times in the United States. Everest sold a part of these papers to help support the family, but the venture started him as a collector, until today he has a fascinating library containing the autographs of almost every president of the United States and rare volumes among which are the first printings of a number of noted works. No scientist could gather his data more carefully or analyze them more thoroughly.

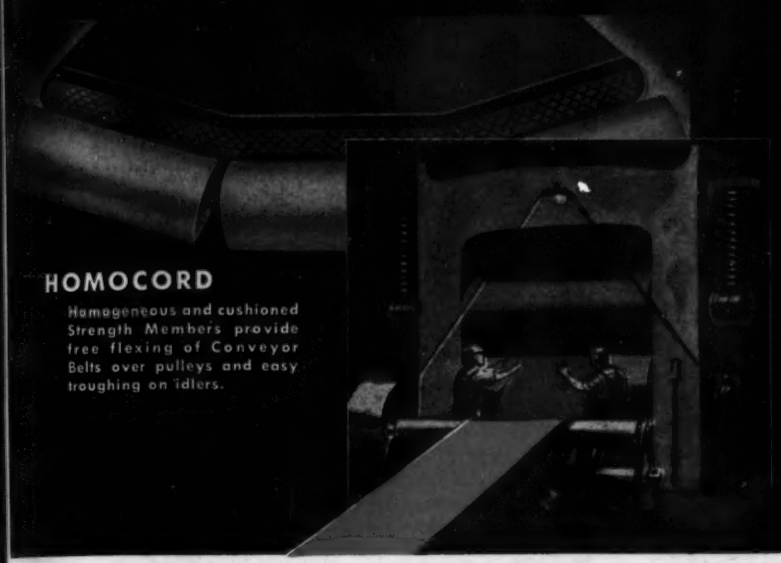
Dr. Allen Abrams
Who Presented TAPPI Medal

D. Clark Everest
TAPPI Medalist

The news of such an enterprising young man spread quickly and he was invited shortly to become the assistant manager of another paper mill. In 1907, when the technical man was unheard of in the industry, there appeared in the local newspaper a comment that Everest "has caused many of the oldest paper manufacturers in the country to sit up and take notice of his successful methods." It was this progressive attitude which later brought him to the attention of a group of Wisconsin lumbermen who had decided to go into the paper business. Everest was called in as consultant and at the first meeting with the organizers was engaged as general manager of the company. During the construction of the mill, a stockholder learned from Everest the age of his assistant, whereupon the stockholder said that he'd be damned if such responsibility should be put in the hands of a man only thirty-five years old. Everest, then only twenty-five years old, wore a generous mustache and confided his age to no one.

In his continuous service of thirty-five years as general manager of the Marathon Paper Mills Company, the medalist has devoted himself fully as much to the betterment of his industry as to the advancement of his own organization. When the Forest Products Laboratory was fighting for existence he rallied support from Congress and from the pulp and paper industry, thus to make the laboratory become an important center of knowledge on wood. On

MANHATTAN



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Whipcord construction gives flexibility, strength and extreme lack of stretch.

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- Industrial Brake Blocks and Lining
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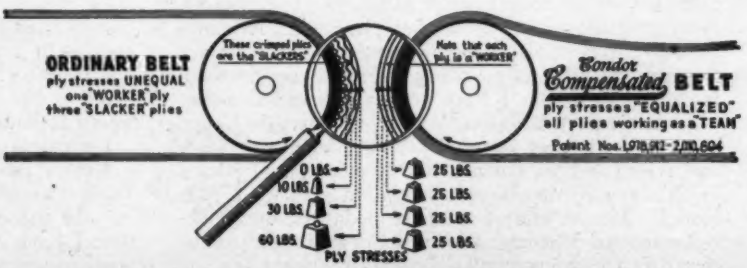
- Rubber Lined Tanks
- Rubber Covered Rolls
- Abrasive Wheels
- Bowling Balls

Just as the sinews hold together and strengthen the muscles without limiting their freedom of movement, so MANHATTAN STRENGTH MEMBERS reinforce and strengthen the FLEXLASTICS*, at the same time that they enhance their flexibility and durability.

MANHATTAN STRENGTH MEMBERS are "engineered," each one for a specific service, fabricated and scientifically located in the precise area or section where they contribute the most to structural life and capacity—just as in engineering design of bridges or trusses. Members of suitable materials, correctly proportioned and treated, are properly placed with respect to all other component parts.

Examination of the diagram below of ordinary and Condor Compensated Belt illustrates clearly what correctly designed strength members accomplish in performance, longer life and notably lower ultimate cost of power transmission. It is an economy which extends beyond the belt itself, to bearing and machine and to uninterrupted production.

Similar advantages result from a long line of exclusive MANHATTAN developments, such as the Homocord principle for Conveyor Belts; Condor Whipcord Endless Belts with Extensible Tips; Condor Whipcord V-Belts; Homoflex Hose in air, water, spray and other types; MANHATTAN Fire Hose with Radio-Active Mildew-Proof Treated Jackets, and many others.



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51st YEAR OF RESEARCH

The record of the first 50 years of accomplishment is the pledge for the second half-century MANHATTAN is now entering with research, testing, care and inspection as a basic policy, so there may be unbroken continuity to its contribution to industry. It will always be sound policy to keep ahead with MANHATTAN.

KEEP AHEAD WITH MANHATTAN

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three occasions he has served with distinction as president of the American Pulp and Paper Association. In the formation of the Technical Association of the Pulp and Paper Industry, he was a charter member and he has been a stout advocate of its principles ever since. Speaking twenty-five years ago, he said, "It is safe to say that only those organizations where the program of research was definite, have succeeded in placing the manufacture of their products upon a sound basis and are now able to take full advantage of their foresight."

Everest has encouraged technical activity in his own company, attributing his industrial success to a policy of continuous technical research and development. He has championed cooperative investigation by the industry, through such organizations as the Forest Products Laboratory and the Bureau of Standards. He was one of the originators of the Institute of Paper Chemistry, for which he has served as Vice President and Trustee since the inception.

But such a statement of this long and eventful career, even with the imposing list which might be presented of the numerous offices and honors, leaves the record quite incomplete. In today's medalist the technician has a superb example of how to win friends, influence people and get results. Always approachable, square and generous to a fault, his consideration for the other fellow has smoothed many a path and has drawn to him an army of friends. The technical man might well learn from him that ideas bear fruit only insofar as the other fellow can be induced to accept them and put them to work!

Now, Clark Everest, it is the wholehearted opinion of this organization that you have contributed notably to the technical advancement of the pulp and paper industry. Because you have fostered the spirit of research, because you have promoted the use of science in business, because you have inspired and encouraged technical men everywhere, the Technical Association of the Pulp and Paper Industry is gratified to present to you its highest honor—the TAPPI Gold Medal.

Mr. Everest in receiving the medal responded as follows:

D. C. Everest Receives Medal

I know of nothing in my business career which has given me a greater thrill or more satisfaction than the receipt of a letter from Mr. Macdonald recently, advising me that the executive committee of the Technical Association of the Pulp and Paper Industry had selected me as the recipient of the Gold Medal Award. I am deeply appreciative of the honor conferred upon me and sincerely thank the members of the committee and of TAPPI for it.

It is, indeed, a great honor to join the ranks of the distinguished gentlemen who have been similarly honored in the past. It is highly gratifying to me since this group includes so many of my close personal friends with whom I have been associated in many ways in the past. Mason, Mahler, Millspaugh, Kress, Wolf and Fletcher were all intimate friends of mine and friends whom I would like to emulate. Perhaps of this group my closest association was with William H. Mason, one of the first medalists, in the development of Masonite and in the organization of the company which eventually became the Masonite Corporation. This development was, in my opinion, one of the greatest contributions to wood conservation ever discovered and I am glad to have had a part in it. I helped William H. Millspaugh in 1900 to take the measurements for one of his first installations of shower pipes which bore his name.

My long association with Dr. Mahler, Dr. Kress and Harry Fletcher covers a multitude of activities, some of which had no bearing whatever on the technical advancement of the industry. The outstanding ones, however, had to do with the organization of the Technical Association, the establishment and support of the Forest Products Laboratory, and the organization and incorporation of the Institute of Paper Chemistry.

I was injected into this industry at the age of 16, when moisture tests of pulp and the use of phloroglucin to determine the presence of groundwood in the old papers made up the activity of the so-called "laboratory." There were no highly specialized jobs in those days and one was compelled to cover many assignments. My own particular field covered everything, including office boy, stock checker, mail clerk and bookkeeper.

Fortunately I landed with a company made up of men with vision and a progressive spirit. My work enabled me to get about the plant, and my contact with such men as Noah Bryant, Frank Milham, and John King gave me a fundamental knowledge of paper making which has been invaluable to me over a long period of years. I was an inquisitive cuss and probably a great nuisance, but having been blessed with a good memory I retained the answers. As mail clerk I opened the correspondence and read it all and at night when I copied the letters in the old fashioned letter press, I read all the answers. I also did the filing where I had a second crack at the correspondence in case I had missed anything the previous day. I soon became a human filing cabinet and the "boss" became more dependent on me. I made it a point to listen as well as work and if absolutely sure of my ground, to bob up with the right information at the right time.

There was much construction work going on at that plant and I came in contact with engineers and construction foremen. They were consciously or unconsciously my teachers. Many of the prominent men of the industry and, of course, all the equipment and supply men visited that plant. I never forgot a face or a name, which stood me in mighty good stead in later years. I will say that with the tremendous growth of personnel in this industry some of the younger crop have, at times, outrun me but I still believe that one's most priceless possession is a wide acquaintanceship.

Dr. Samuel Johnson once said: "If a man does not make new acquaintances as he advances through life, he will soon find himself alone. A man, sir, must keep his friendships in constant repair." Whatever I have learned about technical matters or engineering of any sort has been by absorption—by listening to people who have knowledge, such as those who make up the Association, and there are many here to whom I make due acknowledgment.

I recall distinctly the organization of TAPPI in February of 1915 in the old Waldorf here in New York. Several of the men who attended that meeting are still very active in the industry. Since that time I have constantly carried on a crusade, both in public utterances and in private conversations, in support of fundamental research and of specific research and development. Twenty-nine years ago it was a difficult job to sell management and operating staffs

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on the necessity of technical control. As in all other American institutions the forward-looking men grasped the idea and within a relatively short period, those who lagged behind were forced through competition to adopt the new methods. Some of those who delayed longest suddenly were imbued with the idea that they had really invented "technical organizations." From two hundred members in the early years to two thousand at the present time, indicates the remarkable progress this association has made. If you compare the products of the industry in 1915 with those of today you will find an increase in quality and in use application almost in direct proportion to the increase in technicians employed.

I have said time and again that the men and women of TAPPI are the ones who have given management its worst headaches. It has not only been the difficulty of keeping up with one's own technical staff but in being flexible and versatile enough to keep up with all the other technical staffs of manufacturers engaged in making similar lines of products. The results of your efforts over the past twenty-five years, combined with those of the operating staffs and the engineering staffs of equipment builders, have brought about a greater advancement in this industry than in any previous fifty years.

I am for men and women with ideas; those who have the courage and determination to work them out and demonstrate their usefulness. I have probably listened to as many crack-pot ideas as any of you, but I have *always listened*. Some of them through some modification have developed into real winners.

In speaking to your organization in February 1940, I said: "With each period of stress, either from war or depressions following wars, you have made new developments which have become common practice. What you will do during the current war period, which in my opinion will be longer than any previous one we have known about—no one knows. The use of new species of wood and other materials are well within the possibilities, if the shortage of pulp becomes sufficiently acute. Out of this organization will come something which will be upsetting to many, but in the long run will work for our economic good."

I firmly believe I was right in my prediction—certainly so as to the duration of the war and the shortage of pulp, and I am confident that there have been a multitude of developments in paper and paper products which now have only military significance, which will have widespread application to civilian use postwar.

I have faith in this organization to meet whatever problems we may encounter in the postwar period. There are those who will continue to exist in the clear vision of hindsight but you will go forward to great accomplishment through *ideas* and in the clear vision of foresight.

Wood Pulp Prices Up

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., February 16, 1944—As an emergency measure to assist in maintaining the production of vitally needed supplies of wood pulp, the Office of Price Administration today announced it had raised the ceilings of producers on four major wood pulp grades. Screenings of the same grades and side-runs directly related to them also are given higher ceilings.

The need for an immediate increase in the maximum prices on four grades of wood pulp stems from the fact that current costs have risen to a point that precludes the sale of these grades without serious losses under the established ceilings. A price adjustment is particularly necessary at this time, OPA said, in order to insure necessary seasonal deliveries of pulpwood, the basic raw material in the production of wood pulp.

Wood pulp prices have been unchanged for three and a half years as the ceilings which OPA established in April, 1942, were at the level which producers had voluntarily maintained since July, 1940. Since then, costs have steadily increased, and in the sulphite, groundwood and soda grades, whose ceilings are advanced today, costs have actually exceeded the ceiling prices in certain important producing areas, OPA said.

1. The groundwood pulp ceiling on all sales in the United States, including imports from Canada, is increased $4 a ton. The new ceiling is $50 a ton. Standard newsprint side-runs, which are used for the same purpose as groundwood pulp, are likewise increased $4 a ton to a new ceiling of $50 a ton. An additional increase of $3 a ton is permitted for groundwood pulp that has been dried on paper machines. Only a small quantity is dried in this way. Groundwood screenings are increased $2 a ton, the new ceiling being $32 a ton.

2. Soda pulp ceilings on all sales in the United States, including imports from Canada, are increased $6 a ton. The new ceiling on bleached soda pulp is $72 a ton. The new ceiling on unbleached soda pulp is $68 a ton.

3. Ceilings are raised on sulphite produced in the United States as well as on all sulphite imports produced in Canada. Bleached sulphite ceilings are increased $10 a ton to $86 a ton for softwood and to $83.50 for hardwood. Unbleached sulphite ceilings are increased $8 a ton to $74 a ton for softwood and to $71.50 for hardwood. Sulphite screenings are raised $5 a ton to $43.50 a ton.

(Amendment No. 9 to Maximum Price Regulation No. 114—Wood pulp—effective February 14, 1944.)

Following are the new maximum prices for wood pulp per short air dry ton delivered to consumers east of the Continental Divide exclusive of Denver, Colo. (West of the Continental Divide and in Denver, Colo., ceilings are $6 per ton lower).

Bleached Softwood Sulphite	$86.00
Unbleached Softwood Sulphite	74.00
Bleached Hardwood Sulphite	83.50
Unbleached Hardwood Sulphite	71.50
Northern Bleached Sulphate	86.00
Southern Bleached Sulphate	79.00
Northern Semi-Bleached Sulphate	82.00
Southern Semi-Bleached Sulphate	75.00
Northern Unbleached Sulphate	73.00
Southern Unbleached Sulphate	63.50
Bleached Soda	72.00
Unbleached Soda	68.00
Groundwood	50.00
Groundwood—Paper Machine Dried and Multilated	53.00
Sulphite Screenings	43.50
Sulphate Screenings	38.00
Groundwood Screenings	32.00
Northern Unbleached Sulphate Sideruns	73.00
Southern Unbleached Sulphate Sideruns	63.50
Standard Newsprint Sideruns	50.00

The following are ceilings for sales to the Lend-Lease Administration; per short air dry ton, f.o.b. producing mill:

	Northeast	Lake Central	Southern	West Coast
Bleached Softwood Sulphite	$80.00	$80.00	$78.00	$74.00
Unbleached Softwood Sulphite	68.00	68.00	....	63.00
Bleached Hardwood Sulphite	77.50	77.50	75.50	....
Unbleached Hardwood Sulphite	65.50	65.50	63.50	....
Northern Bleached Sulphate	....	....	....	74.00
Southern Bleached Sulphate	....	....	71.00	....
Northern Semi-Bleached Sulphate	....	....	....	70.00
Southern Semi-Bleached Sulphate	....	....	67.00	....
Northern Unbleached Sulphate	....	....	....	61.00
Southern Unbleached Sulphate	....	....	55.50	....
Bleached Soda	66.00	66.00	64.00	....

Paper Week Stresses War-Time Problems

D. K. Brown, President of Neenah Paper Co., Heads American Paper and Pulp Association at 67th Annual Convention—Government Officials Emphasize Need for Continued Cooperation to Win War.

The sixty-seventh annual convention of the American Paper and Pulp Association and affiliated organizations was held at the Waldorf-Astoria Hotel, New York, February 13-17, inclusive.

The featured speaker at the luncheon on Monday was Donald M. Nelson, chairman, War Production Board. Addresses were also made by Harold Boeschenstein, Deputy Director, Forest Division, War Production Board; by George H. Mead, president, and by Harold Crabtree, former president, Canadian Pulp and Paper Association.

President Mead Welcomes Manufacturers

In welcoming the paper manufacturers of the United States to the sixty-seventh convention of the American Paper and Pulp Association, I must emphasize the fact that this is not a convention in the usual sense of the word. It is a conference of representatives of one of America's greatest industries to determine the best steps which this industry can take to further assist its Government in winning the war.

The paper industry, I am proud to say, enlisted for the duration when this country entered the war. We have backed the attack with increased efficiency in operation, the highest technical experience, and loans of our brilliant top-flight executives to Government agencies, without regard for individual or company benefits or sacrifices.

No industry has more whole-heartedly cooperated with every Government effort, and this spirit of service to the Nation is fully recognized at Washington. On behalf of the American Paper and Pulp Association and its constituent divisional associations, I pledge our Government the continuance of this support until the struggle is ended.

Without the paper produced by this industry, the war could not continue for twenty-four hours. Paper is vital to the war effort in many ways. It is essential for direct war purposes. It is an essential commodity for those industries which are producing war weapons and equipment. It is essential for the every-day requirements of the civilian population, if we are to have the morale at home which means so much in maintaining military operations and industrial production at high level.

Despite the tremendous drains on the industry's resources to produce the paper needed by the Nation, it has been able to maintain a high rate of production. War requirements added to civilian needs have caused an unprecedented demand for our product. The wonder is not that there is a shortage—but that the stringency is not more severe.

For two years preceding actual entry into the war, the Nation was preparing for any emergency which might develop. Today we are in the midst of actual war, but the paper industry is alert to the necessity to plan *now* for the post-war era. While we are giving our utmost to the war effort, we are devoting and must continue to devote the most intensive study to post-war problems—to perfect our preparedness for peace.

Address of George H. Mead

At the time your Board of Governors honored me with election to the presidency of our association, two years ago, I had already accepted, at the request of the President of the United States, service on the National War Labor Board, as an industry or employer representative.

During a considerable part of the previous year,

D. K. Brown
President

Washington-Press Photo Bureau

E. W. Tinker
Executive Secretary and Treasurer

I had served the government in a similar capacity on the National Defense Mediation Board, and during the previous eight years, had frequently visited Washington as a member of the Business Advisory Council to the Department of Commerce, as well as in more active participation with the National Recovery Administration. It is, therefore, a reasonable conclusion that in your selection of a president for this particular period, the association felt that experience in Washington and connection with governmental affairs might be of value to the industry.

In finishing my two-year term of office, therefore, I feel that I must give my associates who have entrusted me with the responsibility of such leadership, whatever conclusions I may have reached as a result of that experience.

Let me first say that the pulp and paper industry has made a splendid contribution to the war effort, and has done it in a broadminded and courageous manner. Member companies have given the best men of their organizations to the service, and to these outstanding patriotic individuals, I wish to express the deep appreciation of our association as well as its president. It is unnecessary for me to review them by name, but those who are with us today must realize how grateful we are that the finest talent the industry possesses has been willing to make every personal sacrifice for the benefit of the whole in service to their country.

Although I have at every opportunity tried to express the gratitude we in this industry feel toward Don Nelson and the men associated with him in the production field as well as the men in the pricing administration, I want the record to show on this particular day our added esteem and obligation.

With a few others in this room, my own business career began with the century. I have watched the great industrial development of America—knowing that we cannot hope to succeed in the future without a careful study of the past, giving proper weight to the mistakes made, in order to avoid repetition.

The three great events of the past forty years have been World War One, the financial and economic disaster twelve years later, and World War Number Two.

One cannot be associated with the Federal Government and live in the seat of its operation, without thinking in national terms, and the question constantly presents itself as to why, in this great era of expansion and progress, we in America should have permitted ourselves to become involved in three such destructive experiences in so limited a span of years, particularly the two great wars.

World War One was not of our making; we found ourselves being forced into an international situation and a European conflict. However, this Second World War should have been prepared for, and if the job had been properly done, the war probably would not have occurred.

We read much in the speeches of public men as to the groups or segments of our society upon whom the responsibility for this negligence rests, but such discussion is now quite useless. All must accept a share of the blame. The period between the wars has been almost equally divided between our two great political parties, therefore, it would be very difficult to prove that the responsibility should be placed on either one.

In the economic field, it is equally difficult to try to place the blame on any one group, since the prosperity we have meanwhile enjoyed has been shared by all, as proven by our having developed the highest standard of living in the world and the greatest freedom for the individual ever known.

It is my observation that if we are to avoid a third world conflagration within another twenty-five years, the four segments of society in America—agriculture, labor, industry and Government, must now sit down together around the table and prepare plans for the future course of our country that will show the way to a peaceful period of development such as has never before been realized. From personal experiences of the past ten years, and particularly the last three, I believe that this can be done.

The most important factor in success will be the government. The magnitude of the problem is beyond description. The difficulties are too many for enumeration but the first step that must be taken by such men as are here assembled, is a change in conception of their relationship with government.

I am as much opposed to government in business as any man, but I am convinced the only way to maintain the balance that every intelligent business man desires, is through understanding of the problem by responsible leaders in both groups.

One of the astonishing things about us is that so many people for so many years have taken the government of our country for granted. The fact that along with inalienable rights, we must assume inescapable responsibilities, has been overlooked.

The very foundation of our society is the government, yet men of Agriculture, Labor and Industry refuse to admit its importance. No step can properly or safely be taken in our social, industrial, financial or political development without the participation of the government in some form, and it must have our first consideration. Unless this be realized, and a new attitude be developed, there will be no table for the parties to sit around.

One of the outstanding products of the period under review is the automobile, and the facts and figures of the twenty-fifth edition of the Automobile Manufacturers Association just issued, are astonishing.

Without the organization and plants of this industry we could never have made the contribution to war production that Mr. Stalin so feelingly expressed himself about at the recent meeting in Teheran. Of course, many other groups have also made great contributions, notably the steel industry, but this development had started long before the period we are discussing began.

One factor in the growth of the automobile, however, not given proper weight in our thinking, is that its almost universal use has been made possible through the development of streets and highways in the country by the government of our cities, states and the nation.

It is now generally believed that the greatest development in the next period of our history will come from the airplane, and while it might be a bit fantastic to say that the air through which it travels is provided by the government, it is a certainty that control of that air must be in government hands.

In a recent article by Mr. James L. Spencer, Vice-President of the Campbell-Ewald Company, entitled "Editorial Advertising," there is ably presented a study of the public thinking of this country as to who might do the best job in straightening things out after the war, the government, business leaders, labor union

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PAPER

leaders, or other people. The majority opinion seems definitely to believe that the government can do the best job. Mr. Spencer's conclusion that advertising can be of great value in establishing confidence in business management is excellent, but we will have to go very much deeper, starting at the very roots of the problem, and through education, example and participation in government, prove that the same talent used in the development of our great industrial country, must be used to continue the progress of America and the world.

While the importance of government to our domestic economy cannot be overemphasized, its participation in our expanding world affairs is still more vital. No important step can be taken in financial or commercial negotiations in foreign countries without the approval of our Federal Government, and all continuing developments must have governmental sanction and protection. It is our obligation as citizens to assist in every possible way in the tremendous work of organization for the task before us, in this field.

One of the impressive documents I have recently received, is from my good friend, Arthur D. Whiteside, President of Dun and Bradstreet, on the subject of reconversion and the postwar period. Mr. Whiteside has recently resigned from the War Production Board where he has been directing such work under Mr. Nelson. Over the past ten years he has given much of his time to government and industry matters, having done an outstanding job in the N.R.A. and occupied other positions in the War Production Board. Part of his introductory page reads as follows:

"On the assumption that the war will be won, it is impossible to exaggerate the critical importance of the Reconversion and Postwar period to the American people.

"And throughout all of our planning, every effort should be directed toward injecting Government into business *only* to the degree necessary to attain the objectives."

The point is that government becomes necessary "to attain the objective," in Arthur Whiteside's opinion.

There is no doubt in my mind that the experience of recent years, particularly the participation of industrial and business men with governmental war organizations is in preparation for this new phase of our national life. The development is inevitable, and the sooner we adjust ourselves to it and really begin to use the facilities provided for it in the important Department of Commerce and other agencies which we are already generously supporting but using little, the better it will be for us and the country.

The Pulp and Paper Industry is still largely composed of smaller units, many with "owner-management," in close touch with the communities in which they operate. Great good can be done and invaluable service rendered the country if the members of this association are willing to accept this new philosophy and then bring to their communities an understanding of the problem.

It is my hope that while passing on to another the leadership of The American Paper and Pulp Association, I may still be permitted to assist in this as well as other of your activities.

I have deeply appreciated the confidence you have given me during the past two years, and I thank you for your presence today.

Address of Donald M. Nelson

"Paper is essential to keep a strong and sound economy to carry on the war," declared Donald M. Nelson. "We do not like to ration products, but it is essential to maintain distribution. I can say to you today that American industry has responded to the big job 100%. The production that has been allotted is an assurance of the great importance of the system of private enterprise. The paper industry has done a good job, so good a job that it has been taken for granted. I can't begin to tell you of the importance of paper in this war. The question now is—How are we going to get more? We have every confidence that problem is going to be licked. We know all the difficulties—and there are many, and I realize we have to get more paper, yet hold the line in prices; also get more men and other necessities.

"I know the difficulties that beset you in this industry, of the equipment of all sorts that you need. We will try to work them out by using ingenuity. You are in this position probably because we took your industry for granted. At the same time we tried to maintain essential civilian economy. We must have paper for the distribution of news, books and all sort of things. We cannot carry on this country without paper. It is one of those things we must have. We would not like to ration paper. I am sure that it will not be done.

"As long as the military-men require goods, we must supply them," Mr. Nelson said. "That is the first job. The second job is to supply paper for the civilian economy. The ideal is to increase production so that a number of items would not have to be eliminated. Some items have had to be eliminated and as production is increased, we will reinstate them. This is the job before you, a job right in your laps."

Mr. Nelson urged that the paper industry send more of their best men to Washington to help do a good job. The paper industry has supplied many men to work with the WPB and many are still doing valuable work for the war. At present we must lay aside all consideration of post-war plans in order to get on with the war. Critical requirements are so great in relation to supply that all must be put aside to win the war. The policy of allocations of pulp will be worked out on as equitable a basis as possible. Mills are requested to make types of paper most essential for the war effort. The speaker pointed out that the Army and Navy are experiencing difficulty in getting bids on their requirements. It is part of industry's duty and contribution to the war to provide these essential paper items, he declared.

Mr. Nelson said he was frequently asked when the war will end. "I do not know. No one knows," he said. "The policy of WPB is to prepare its program to meet production needs as long as the need exists. The needs are greater in 1944 than they were last year. Several items will have to be produced in larger quantities. The military services need 700,000 items and it is our job to provide them." He suggested that the industry consider the various problems and lick them. In conclusion Mr. Nelson thanked the paper industry for the fine cooperation it has gladly given and asked them to do a little more.

Address of Harold Boeschenstein

A great part of the leaders of this industry today understand the situation, recognize their responsibilities and are facing them squarely. These leaders

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are willing to bear their full and fair share of whatever sacrifices may be involved, and have rolled up their sleeves and have gone to work on the problem. Donald Nelson has given you a picture of the growing importance of the job this industry faces. All but a very small proportion of the 700,000 items which Mr. Nelson mentioned for operations overseas require packaging either in paper, paperboard or in lumber and all come from the same primary product. In addition, paper is a component part of many essential war materials. In connection with the consumption and production of paper it must be remembered that the use of paper and paperboard increases almost in direct ratio with the increase in total production. The WPB believes that the pulp and paper industry will solve its problems by the same kind of united effort with which American industry has licked many other war production problems.

"The WPB has a responsibility of laying before this industry the facts—(1) What we are trying to do, (2) Why it is necessary and (3) As far as possible, to see that there is an equitable sharing of the load. The problems facing the pulp and paper industry are: 1—to increase the production of raw materials, primarily pulpwood, supplemented by waste paper stock and to do this in spite of manpower and equipment shortages; 2—recognize the long 'in process' cycle with the exception of the South which makes it necessary to bring consumption into balance with production. Consumption must be brought into line with production on the basis of pulpwood supply, because we no longer have more than working inventories to draw on; 3—make sure that critical and most essential paper requirements are taken care of first and in necessary amounts. These are the considerations behind the existing WPB orders and the basis for our policies in establishing essentialities and allocations. All this has been done with the advice and help of capable Industry Committees representing all segments of this industry."

Mr. Boeschenstein gave us an illustration of the increased demands for paper and paperboard the fact that many more V-Boxes must be supplied this year and that the military requirement for waterproofing paper had increased by almost 700% since the last quarter of 1943.

Mr. Boeschenstein said that in an effort to increase production of paper and paperboard, the WPB has obtained the cooperation of the War Food Administration, the War Manpower Commission, the Selective Service, and the Army and we have established closer liaison with the OPA. We can expect better results from this cooperation in the future.

Mr. Boeschenstein stressed the fact that the operation of the entire pulp and paper industry depends upon woods management and woods production. "To accomplish this important job," Mr. Boeschenstein said, "the woods management must have the backing of the executives in the industry. The woods management of this industry has a selling job to do to get the cooperation of local representatives of other government agencies. They need to know the Regional Directors of the War Production Board and of the U. S. Employment Service people and to develop with them a working arrangement.

"In order to increase the pulpwood supply it is necessary to maintain the present woods labor forces, particularly the supervisors. We are getting a tremendous amount of help from farmers and seasonal workers. We have received excellent cooperation from the Provost Marshall General's office in the training of prisoners and a more liberal policy for the use of prisoners is now in effect regarding the use of prisoners. Prisoners are now being used in New England, the Lake States, and more extensively in the South. The cooperation of the paper companies is necessary in working out some of the practical details in using the prisoners of war."

Mr. Boeschenstein mentioned the recent Texas ice storm which he described as a major disaster but as a possible source of salvaging pulpwood.

"In view of the fact that 90% of the pulpwood moves at least part of the way by truck, it is necessary to sound a word of caution concerning trucks, tires, gasoline and railroad cars. In spite of the excellent cooperation of the Office of Defense Transportation tires will be very tight in the next three months and freight cars short in the South and the Pacific Northwest," Mr. Boeschenstein said.

The WPB is now issuing monthly reports giving facts on production, consumption and inventories broken down by segments of the industry, according to Mr. Boeschenstein. There are also quarterly reports on WPB policies and method of allocation. These are available to the entire industry.

Mr. Boeschenstein said that mills that have supplies of pulpwood will be expected to make grades of pulp most needed within practical limits of their facilities because it is obvious that we must make pulp where we have the pulpwood. At the same time, WPB will expect paper mills and converters to make types of paper most urgently required from the pulp authorized for their use.

Mr. Boeschenstein stressed the point that the paper mills have an obligation to supply the requirements of the Army and Navy and mentioned in this connection twelve items which the Army now requires and for which there were no bids.

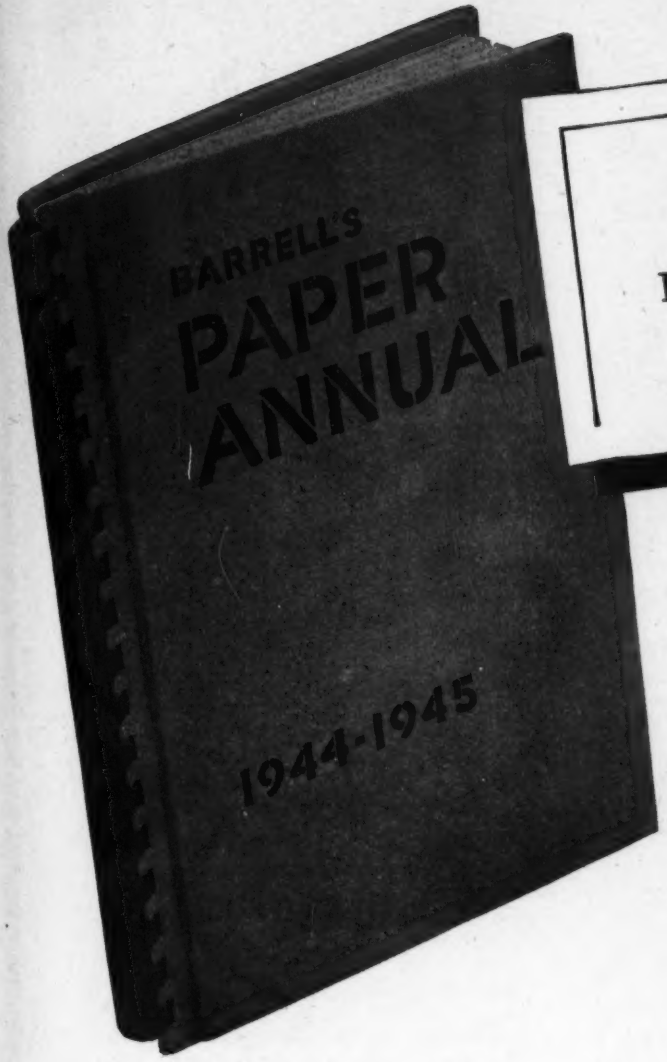
In conclusion, Mr. Boeschenstein said that the initiative, resourcefulness and teamwork of the pulp and paper industry and the governmental agencies would solve the problems which confront us.

Address of Harold Crabtree

The executive board of Canadian Pulp and Paper Association has charged me, as a past president of the association, with the pleasurable duty of acknowledging, during the past year, the same useful collaboration from you that has now become traditional between the two associations. From all of us I bring you our warmest greeting and assurance of our goodwill.

It may interest you if—very briefly—I give you the high-light facts of the Canadian industry's operations this past year—our fourth year of war. The pulp and paper industry is the largest single industry employer of labor in Canada. To place our operations in proper perspective, let us have in mind some facts as to Canada's manpower.

Our total population is 11½ millions. The population of the United States is 132 millions,—so the figures I am about to state should be multiplied by 11½ for the approximate figures in terms of your own population. Our male population—ages 18 to 45—is 2½ millions. Of these males 870,000 have entered the armed forces,—one from every three. It is estimated that prime war industries, such as munitions plants, shipbuilding and associated industries,—employ about one million, including women.



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This leaves a small remainder of able bodied men for agriculture, fishing, the manning of hundreds of merchant ships that have been launched in Canada, and essential civilian pursuits,—let alone the forest industries, on which there have been abnormal calls for lumber for prime war needs that could not be refused,—and for supplies of pulp, paper, and their products surpassing any previous output.

Obviously, this situation has made for onerous problems in our industry,—wherein man labor is the basis of wood production from which pulp and paper manufacture stems. Foreseeing the inevitable squeeze of manpower, our industry extended its seasonal woods operation over longer periods; now it continues almost the year round. This raised costs, but it produced wood.

The application of National Selective Service regulations was amended to take full advantage in woods work of farm fabor during slack periods on the farm;—woods work was placed in a priority category next to the top classification for shipbuilding, munitions plants, agriculture and certain other specified prime war needs. Our industry had also to cope with substantial curtailment of hydro-electric power to make it available primarily for aluminum production that sustains air superiority for the United Nations.

This is the background;—but we are all more interested in results. Of these I will state only the salient facts. During the year 1943, we were able to send to you more pulp than in any previous year, —about double the quantity shipped in 1937,—the peak pre-war year. This more than discharged the increased obligations for our pulp shipments during 1943, agreed between the Pulp and Paper Administrations of both countries.

In relation to the average of the five year pre-war period our shipments to United States in 1943 were as follows: Pulp—218½—more than double, newsprint paper—112%—in all about 75% of United States total consumption of newsprint, and pulpwood —118½%. As to pulpwood cut in Canada for sale during year 1944, Canada shares the total output 50/50 with United States, guaranteeing a minimum export of 1,250,000 cords.

Canada supplied also about 70% of England's pulp needs,—and with some from Newfoundland, all newsprint paper England imports. Consumption of both has been cut in England to an irreducible minimum. Canada's own consumption of all grades of paper and board has been progressively reduced. In terms of wood consumed it represents but 17% of Canada's total output, for newsprint alone under 3%.

In addition to these record shipments to United States, the Canadian industry has had substantial emergent calls for its products to support the overall war effort of the United Nations.—which for successful prosecution does require pulp and paper products despite all misinformed sidewalk opinions to the contrary. These calls from markets unusual to us have been met.

Report of Secretary Tinker

E. W. Tinker, secretary-treasurer presented his annual report in part as follows:

The annual report of the American Paper and Pulp Association covering the year 1943 is confined to abnormal activities brought on by the war. The various steps that have been taken have been dictated by necessity and in every instance measured by their effect upon the prosecution of the war.

I wish to convey my great personal appreciation of the work done by the various committees and individuals who have cooperated during a difficult year. Only through such efforts has the industry been able to redeem its responsibilities. I also wish to acknowledge, on behalf of the Association, the fine day to day cooperation of the Secretaries of the Divisional Associations affiliated with the American Paper and Pulp Association.

General Industrial Position

It is well recognized that with the initiation of the National Defense Program there grew a general feeling that there was an over supply of paper available and that curtailment of the industry was desirable in the interest of the war effort. For some time no action along this line was taken because no useful purpose to be served by such curtailment could be found. However, as conditions became more difficult, and particularly as the fiber supply became more critical, many extreme measures were proposed. Some of these reached the point of considering limiting the industry's production to 50% of normal. Much effort and considerable time was spent by association committees and by the staff in changing this viewpoint with the final result that in the War Production Board paper supply became recognized as a critical problem and extensive reorganization was effected in order to avoid what was recognized as another pending shortage problem.

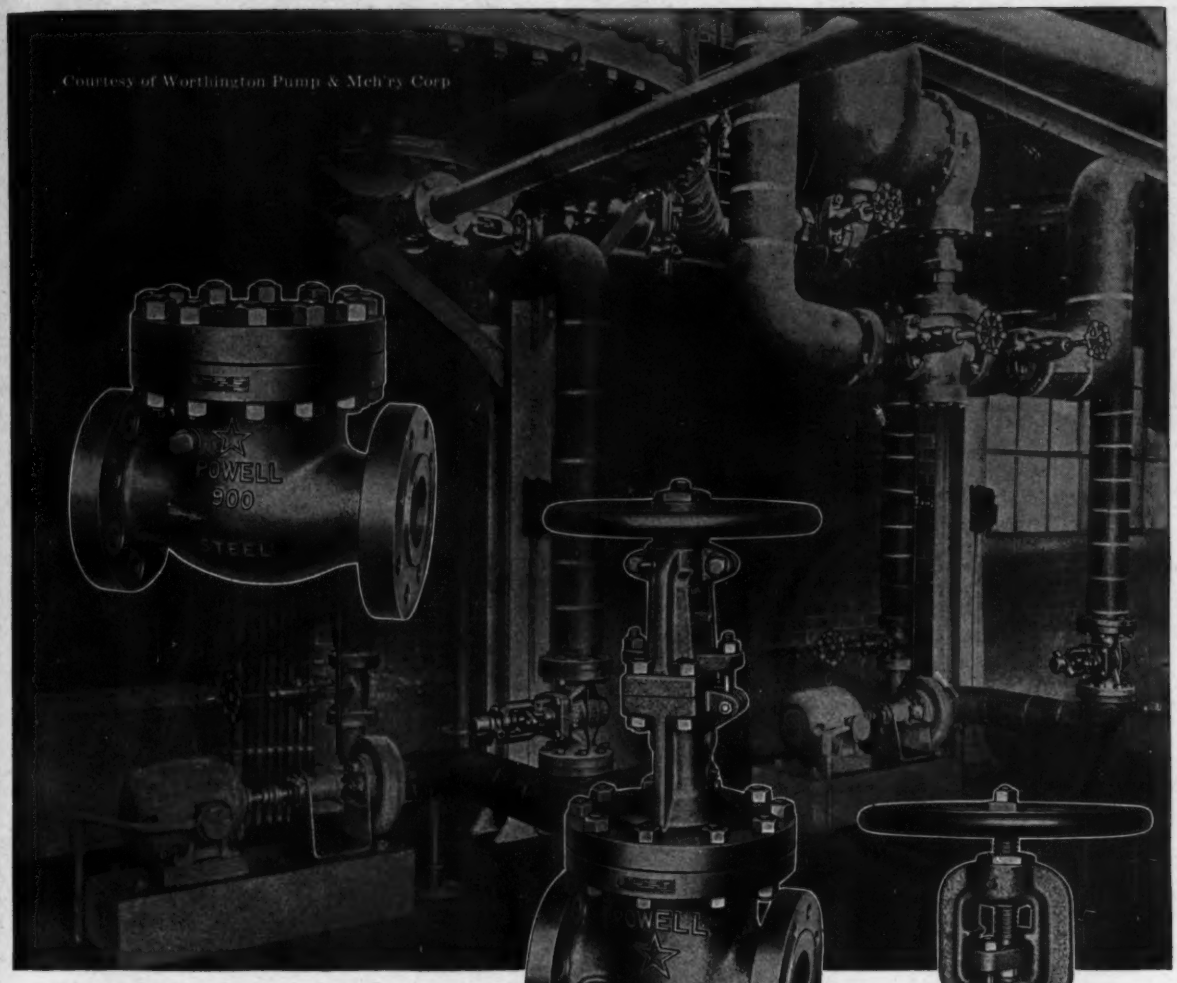
Pulpwood Supplies

Basic to the whole problem of fiber supply was the industry's position with respect to raw materials and particularly pulpwood. Strong pressure was brought to bear in the reorganized set-up in WPB to establish pulpwood as a division, and to make one outstanding man responsible for it. These efforts ultimately met with success.

Forest products production, as related to the War Production Board, is controlled, as to policy, by a policy committee representing all of the war agencies, including the military, the Office of Price Administration and the War Manpower Commission. After much discussion and several presentations, the Chairman of the War Production Board directed that a representative of the Pulpwood Division in the War Production Board should be on the committee.

The Congress during the year appropriated to the War Production Board one million dollars for the promotion of the production of forest products. This million dollar item is to be matched by contributions from the states and from Federal Agencies in a like amount. In its inception this project was directed entirely to the increased production of lumber with no consideration of the requirements of the paper industry. It was not until September 15 of the year 1943, that we were able to get pulpwood production included in this undertaking.

In February of 1943 several meetings with representatives of periodical publishers were held at which time the paper supply situation was discussed. As a result of these meetings the publishers initiated an advertising campaign to increase pulpwood production, since they recognized it as fundamental to their problem. Since that time a large and well financed effort has been in effect, which has brought to the attention of farmers in practically every state where wood production is a possibility, the requirements of the paper industry for pulp and pulpwood.



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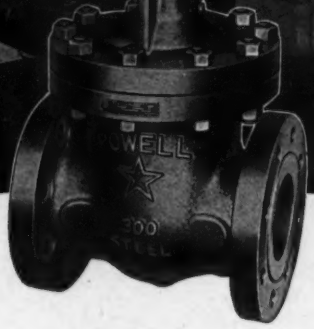


Fig. 3003—Class 300-pound Cast Steel Gate Valve, with flanged ends, outside screw rising stem, two-piece bolted flanged yoke and taper wedge solid disc. Available in sizes 1¼" to 24" incl.

Fig. 9061 (top, left)—Class 900-pound Cast Steel Swing Check Valve, with flanged ends, and bolted cap. Available in sizes from 3" to 8", inclusive.

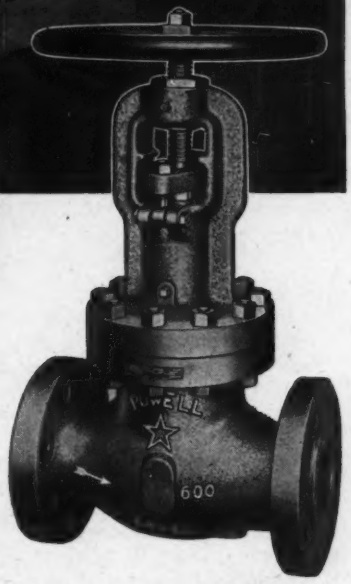


Fig. 6031—Class 600-pound Cast Steel Globe Valve. Has flanged ends, outside screw rising stem, bolted flanged yoke bonnet and plug type seat and disc. Available in sizes 1½" to 12", incl.

POWELL VALVES

Price Ceilings

Price Ceilings are considered a problem of the Divisional Associations. However, when broad OPA policies are established, the administration of which adversely affects the industry's interests, action has been taken through the Association to obtain reconsideration.

In the year 1943 arrangements were made for representatives of the Office of the Administrator to spend two days in contact with the American Paper and Pulp Association and the Divisional Associations in order that they might obtain understanding of the industry's problems as a whole and the problems of the various divisions of the industry.

Lack of coordinated action on price matters relating to forest products dictated the necessity for an appeal to the Office of Price Administration for a revision of the organization in order that coordinated action under one unbiased administrator might be obtained. This proposal was fully presented to the Office of Price Administration as well as to the War Production Board but as yet satisfactory remedial steps have not been taken.

It is now quite apparent that increased costs, as reflected in the increased costs of materials and curtailed operations due to lack of raw materials have brought about a generally unsatisfactory price situation within the industry which is not fully recognized in the Office of Price Administration. Consideration is being given to methods of obtaining corrective action.

Manpower

Repeated presentations have been made to the War Manpower Commission of the necessity for additional manpower if the industry is to meet its obligations in supplying essential war as well as civilian requirements. Some action has resulted but the situation is still eminently unsatisfactory.

The fundamental difficulty with the War Manpower Commission lies in the policy of the Commission which leaves its local office practically on an autonomous basis without adequate and effective directives as to critical problems which must be met.

Conclusion

Only by the taking of effective and definite action can the difficulties of the pulp and paper industry be solved. The steps that have been taken during the year 1943, it is recognized, were inadequate. If the shortage of fiber could be solved it is believed that the industry would be in a position to meet fully its obligations. Every effort to this end is being made and all actions are being closely coordinated with the programs of the different agencies of the War Production Board which now is taking a positive approach.

I know you will appreciate that in this report it is impossible to cover the dozens of related problems that have had to be met and solved. However, it seemed well to summarize the major problems of 1943 in order that progress might be measured and in order that we might best chart our course for the year 1944.

One thing seems quite clear and that is that paper and paper products are receiving public recognition, such as they have never received before, and at least some of the complex problems are on their way to a satisfactory solution. An acute and disastrous shortage of paper and paper products is unnecessary and under our tightly controlled economy the responsibility for any such situation will rest with the responsible government agencies. The industry will do its part.

A.P.&P.A. Elects Officers

At a meeting of the Executive Committee and Board of Governors, on Wednesday, February 16, the following officers of the American Paper and Pulp Association were elected:

President: D. K. Brown, President, Neenah Paper Company, Neenah, Wisc.

Vice-Presidents, constituting Executive Committee: Folke Becker, president, Rhinelander Paper Company, Rhinelander, Wisc.; Hugh J. Chisholm, president, Oxford Paper Company, New York City; R. K. Ferguson, president, St. Regis Paper Company, New York City; P. H. Glatfelter, president, P. H. Glatfelter Company, Spring Grove, Pa.; J. H. Hinman, president, International Paper Company, New York City; D. S. Leslie, 1st vice-president, Hammermill Paper Company, Erie, Pa.; R. A. McDonald, executive vice-president, Crown Zellerbach Corporation, San Francisco, Cal.; John R. Miller, vice-president, West Virginia Pulp and Paper Company, New York City; Robert F. Nelson, vice-president and general manager, Glassine Paper Company, West Conshohocken, Pa.; Cola G. Parker, president, Kimberly-Clark Corporation, Neenah, Wisc.; Dwight L. Stocker, president, Michigan Paper Company, Plainwell, Mich.; R. B. Wolf, manager, Pulp Division, Weyerhaeuser Timber Company, Longview, Wash.; George R. Wallace, president, Fitchburg Paper Company, Fitchburg, Mass.

Executive secretary and treasurer: E. W. Tinker, American Paper and Pulp Association, 122 East 42nd street, New York.

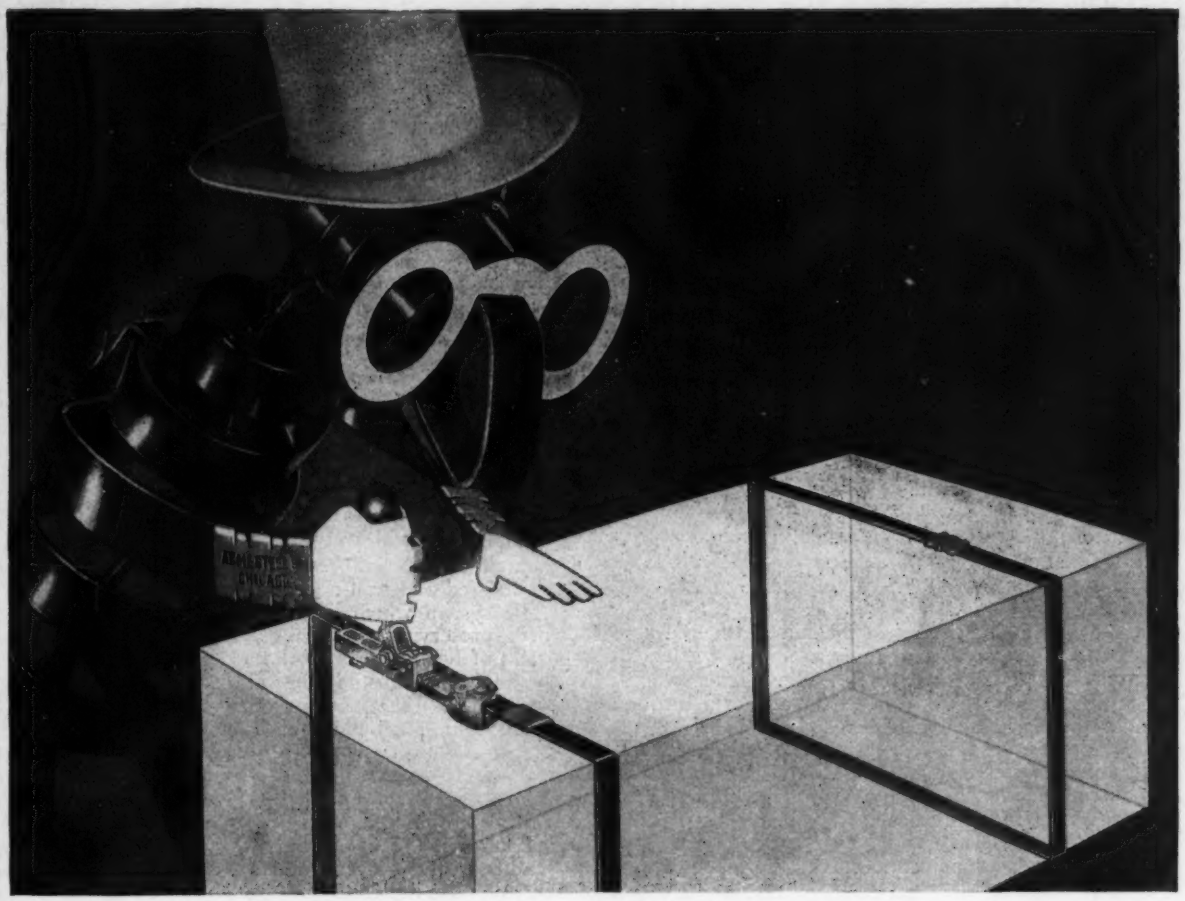
Salesmen's Meeting and Luncheon

The Salesmen's Association of the Paper Industry held its twenty-fifth annual meeting on Monday, February 14, at the Waldorf-Astoria Hotel, New York. The following officers were elected: president, Burt B. Fisher, Bergstrom Paper Company, Neenah, Wis.; Eastern vice-president, Stanley Styles, Martin Cantine Co., Saugerties, N. Y.; Eastern assistant vice-president, E. F. Miles, Crocker McElwain Co., Holyoke, Mass.; Western vice-president, Forrest D. Patterson, Flambeau Paper Company, Park Falls, Wis., Western assistant vice-president, E. J. Edwards, Howard Paper Company, Urbana, Ohio; secretary-treasurer, Dr. E. O. Merchant, 122 East 42nd street, New York.

The annual luncheon of the Salesmen's Association of the Paper Industry was held on Tuesday in the grand ballroom of the Waldorf-Astoria Hotel. The attendance at this, the silver anniversary of the association was the largest in history, with more than 1,500 present. A birthday cake was cut and served to former presidents. Norman T. Beardsley, retiring president, presented his successor, Burt B. Fisher, of the Bergstrom Paper Company, Neenah, Wis., with the Salesmen's Medal, which is presented to all presidents on the expiration of their term of office.

Address of Norman T. Beardsley

We believe that the number one sales problem of the pulp and paper industry of the United States is public relations. We believe that the paper manufacturers, merchants, converters and allied industries will recognize the necessity for uniting to use their collective power to protect our mutual interests in the critical postwar period.



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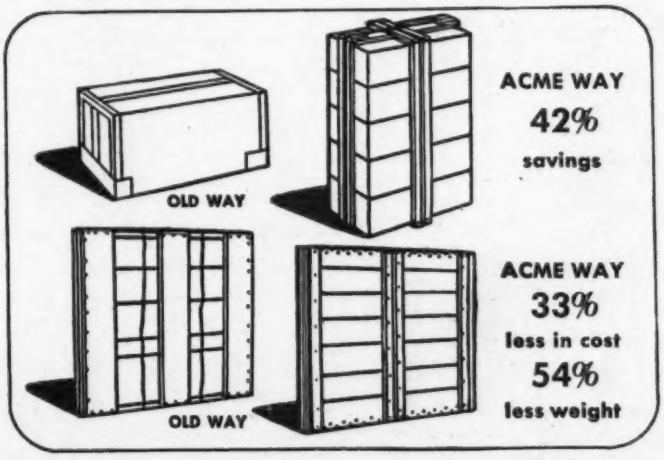
To the right you may see two actual cases of results following Doc. Steelstrap's diagnosis. Write for our technical advice —there is no obligation.



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Our industry is in a critical situation. It is questionable whether some branches of our industry are going to be able to meet the combined demands of the military and the civilian.

Presently the paper industry is one of the most critical, if not the most critical problem in the War Effort.

As is customary, there are attempts to place the blame for this situation. You undoubtedly have heard, as I have heard, that the paper industry is non-cooperative and selfish.

While some part of the blame may be ours, I cannot agree that the full responsibility for the present situation rests with us.

A little over a year ago, this industry was considered non-essential. It has always been difficult to understand—in the face of a few pertinent facts.

Great Britain, as badly as they needed other supplies, were devoting a rather substantial proportion of the limited number of bottoms available to import paper and pulp from this country.

It was known that with Scandinavian materials not available, the bulk of the burden of supplying the Allied nations with the necessary pulp and paper would fall on the productive facilities of the United States.

Yet, in spite of this, we were still considered non-essential: our wood-cutting labor was drafted or attracted to other industries by the higher wages; our mill personnel was drafted or attracted to other industries by higher wages.

While this was taking place, the paper industry was pleading its cause, pointing out the inevitable result of a continuation of this policy. Their efforts, however, were attributed to selfish motives and the policy continued.

The good salesman cannot afford the waste of time to look backward.

At the present time the true essentiality of this industry is being recognized and it is our job as an industry to do everything in our power to get our productive facilities operating at maximum and get this job done.

We cannot afford, as an industry, to fall down, thereby losing the confidence of either the civilian population or the Armed Forces.

If the blame for this situation rests with our industry, it would seem to be that the real basis for the blame is the fact that due to our negligence, the public accepts paper as they do fresh air or water and has never fully realized the essentiality of paper to their daily existence.

This industry has never recognized the necessity for taking the Public into its confidence and of setting up the machinery by which its collective power can be utilized for education and industry relationship.

Regimentation, whether it be for war or for social purposes, is designed to submerge the individual. It does not necessarily mean, however, that an entire industry must submerge, if the collective power of the industry is used to assure the industry of its proper place and relationship among other industries in our economy.

It is very interesting to watch the way in which other large industries have faced this problem.

A Public Relations Program has been almost the stock answer for every industry faced with a similar problem.

While this matter seems to be a new story in the paper industry, it is an old story in many of our leading industries of this country.

Our next speaker is a representative of one of the oldest large businesses in this country.

Address By Robert S. Henry

Robert S. Henry, Assistant to the President, Association of American Railroads, spoke on "Industry's Third Obligation," in part as follows:

The industrial system of the United States has been under fire for more than a dozen years. It has been subject to criticism—sharp, barbed criticism—by very keen young men who are experts in the juggling of words. It has its faults. Those faults may easily be magnified. It is no trick to point out the failures, the lack of perfection in the system of enterprise which has built this nation. It is said that one-third of our people are ill-fed and ill-clad and ill-housed, and I suspect that it is true—but, if it be true, then by the same token, two-thirds of our people are well-fed and well-clad and well-housed. And where else in the history of the world, or where else on the face of this globe, will you find a numerous people of whom it can be truly said that two-thirds of them are well-fed and well-clad and well-housed?

The system which has produced such a result is worth preserving, but neither that nor any other system of business can work and do its part, or even stay alive, in a hostile political "climate." I use the word political there not in the narrow sense of partisan organization, but in the broad sense of popular government under which we live. No business lives by itself. It deals with other businesses, and besides dealing with other businesses, it deals with people, politically organized people, people organized into a government.

Industry, then—every industry—has more than one obligation to itself, to the system of enterprise of which it is a part, and to the people of this nation. Its first obligation, obviously, is to turn out a good product or deliver a good service. This obligation has been, on the whole, superbly well met by American industry as is evident by the degree of comfort and well-being of our people—one of the marvels of the modern world.

Every industry has a second obligation to sell its product or its service at a price which permits, and even encourages, the widest use of the product or service which is feasible. That this second obligation of industry has been well met in America, is shown by the impressive statistics of the distribution of the comforts and conveniences of life, by the wide-spread and tremendous consumption of all manner of products, by the almost universal use of our great public services.

But every industry, too, has a third obligation, not only to itself but to the system of which it is a part—the obligation to explain itself to the people whom it serves. There is an obligation to let the people know, not just the product made or the services rendered, but to let them understand what the industry is, what it does and means as an essential part of the business system by which America has come thus far along the road.

No business lives alone. We are all an inseparable part of a system, a way of living, a way of doing business in this country which has produced the result known as the American standard of living. That way has failed of perfection at times and in places, of course. It is subject to attack and to criticism for

Official U. S. Army Signal Corps Photograph

AIR ALERT *over there* relies on alertness *here!* To keep *STEAM* plant power output equal to wartime demands use . . .

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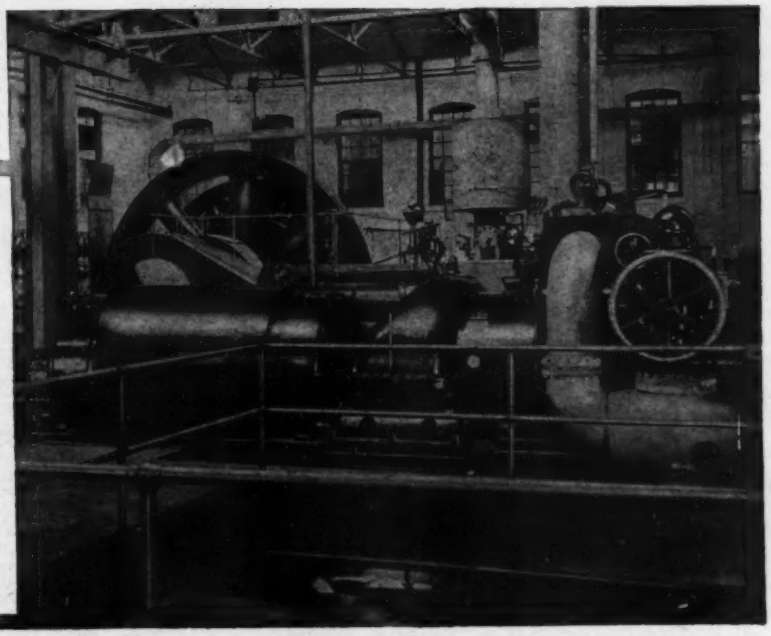
(Write for "The Service Factor"—published periodically and devoted to the solution of lubricating problems.)



SINCLAIR INDUSTRIAL OILS

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its failures. It can do better than it has done, and it will do better, but it has done magnificently well.

And yet if it is to survive, particularly in the trying times ahead, it will survive only through the securing of a proper public understanding and appreciation of what the system is and what it does, how it works, and the marvels that it accomplishes. To secure such an understanding, every industry has a responsibility to the people of this country, not only to do its job, and to do it well, but to explain itself, to let people understand. Only in that way will the people understand and appreciate the part of each industry in the system, and the workings of the system as a whole.

The obligation of industry sums up, therefore, to both doing the job and telling the public about it. The public relations of an industry, that is, is more than putting pieces in the papers, publishing advertising, putting on radio programs, or making speeches after luncheons. The public relations of an industry starts on the job. The facts must support the stories told.

A public relations department cannot make everything all right unless things are right. The public relations of an industry is not a one-man show. It is not a departmental show. It is not a side line—it runs through the whole business, an integral part of its operations. If it is not so treated, no one can get the full results, the full possibilities that can be had.

It is hard to measure the results of a thing of that sort. You can't find it in sales. You may not even be able, directly, to find it in your profit and loss accounts and yet the results are there—hard as they are to measure.

I speak on that with some conviction, because of the experience in the industry that I know most about, the railroad business.

I submit that nearly everything that has been done by the government to railroads in the last 50 years is now being done, or is in the way of being done, or has been done in the past decade or so, to most other lines of business.

So perhaps it is worthwhile for other lines of business to take note of the experiences of the railroads as perhaps indicative of some of the things in store for themselves.

Tissue Association

The Tissue Association elected the following officers at its annual meeting at the Waldorf-Astoria Hotel:—President, R. B. Stevens, Stevens & Thompson Paper Company, Greenwich, N. Y.; vice president, John McEwan, Mohawk Valley Paper Mills, Little Falls, N. Y.; treasurer, B. F. Picola, Gotham Tissue Mills, Salem, New York; executive secretary, Ross A. Fife, 122 East 42nd street, New York.

Board of Directors—Wayne A. Brown, National Paper Products Corporation, Div. Crown-Zellerbach Corp.; J. M. Conway, Hoberg Paper Mills, Green Bay, Wis.; E. E. Grant, Crystal Tissue Co., Middletown, Ohio; A. B. Hansen, Northern Paper Mills, Green Bay, Wis.; Joel S. Hartman, Barclay Tissue Corporation, Brooklyn, N. Y.; Grafton Houston, Fort Howard Paper Company, Green Bay, Wis.; J. H. Leo, Brown Company, New York, N. Y.; John McEwan, Mohawk Valley Paper Mills, Little Falls, N. Y.; John McKirdy, Jr., Scott Paper Company, Chester, Pa.; R. A. Monteith, Personal Products Corporation, Milltown, Ohio; C. E. O'Connor, Berst-Foster-Dixfield Company, New York, N. Y.; B. F. Picola, Gotham Tissue Mills, Salem, N. Y.; B. I. Reider, Victoria Paper Mills, Fulton, N. Y.; Sam Sall, Modern Tissue Mills, New York, N. Y.; R. B. Stevens, Stevens & Thompson Paper Company, Greenwich, N. Y.; James F. Suter, Rondout Paper Mills, Napanach, N. Y., and R. W. Sweet, Sweet Brothers Paper Manufacturing Company, Inc., Phoenix, N. Y.

Divisional officers: Roll Toilet Tissue Division, Chairman, Joel S. Hartman, Barclay Tissue Corporation; Vice-chairman, John McKirdy, Jr., Scott Paper Company; Paper Towel Division, Chairman, Wayne A. Brown, National Paper Products Corporation, Div. Crown-Zellerbach Corporation; Vice-chairman, H. G. Wintgens, Hoberg Paper Mills; Sanitary Absorbent Tissue Division, Chairman, R. A. Monteith, Personal Products Corporation; Vice-chairman, Sam Sall, Modern Tissue Corporation; Jumbo Roll Division, Chairman, R. W. S[illegible] Sweet Bros. Paper Manufacturing Company, Inc., Vice-chairman, James F. Suter, Rondout Paper Mills; Wrapping Tissue Division, Chairman, John McEwan, Mohawk Valley Paper Mills; Vice-chairman, Harry G. Cook, River Valley Tissue Mills.

Joel S. Hartman, chairman of the Roll Toilet Division spoke in part as follows:—

In normal times, the external pressures upon an industry are few and evolutionary in nature. During this past second year of a war in which our country carries the overwhelming productive load, external pressures have steadily stiffened—principally these:—

1. The control of our raw material through the War Production Board.
2. The control of our labor through the Selective Service, the War Manpower Commission and the War Labor Board.
3. The control of the consumption of our products through the earmarking of requirements for Armed services.
4. The control of our incoming dollar relative to the dollar we send out, through the Office of Price Administration.

On the whole, we can be proud of the record of our industry under these conditions. We have satisfied every War requirement made of us and at the same time have seen that Civilian requirements have been met with a minimum of dislocation of distribution.

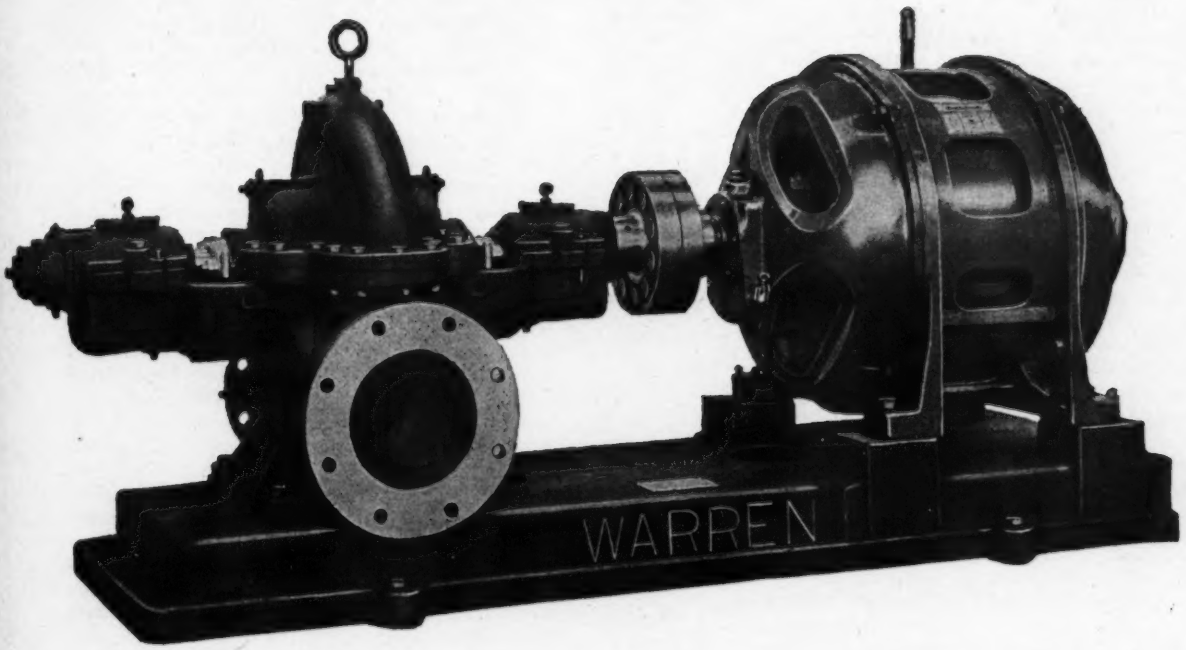
But, gentlemen, the War is heading us toward more stringent controls and 1944 will call for every ounce of collective ingenuity we can muster, if we are to contribute our best efforts toward winning this war and at the same time preserving the best possible going concern into which to welcome back our victorious men!

It goes without saying that an industry cannot successfully cope with these external pressures unless it bands together 100% for combined attack on these problems. Piecemeal, company by company we are sunk before we start. War means Government control through Industry Cooperation. In the very nature of things Government cannot make the wise and at times lightning decision it must make, working with individual companies throughout this vast land. It must do group work and likewise we must respond to this situation as an industry 100% if we are to give our best to our country and to our own company.

This association is the focal head of the industry,

PUMPS

that keep up with the mill



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At the time of their installation at a well known Eastern Paper Mill, 7 Warren Pumps were called on to handle 800 gallons of white water a minute. Then the capacity of the mill increased — so the operating speed of the Warren Pumps increased, also, to obtain the capacity of *900* gallons per minute. Now that the tonnage of the mill has again been increased, the same 7 pumps are obtaining *1000* gallons a minute by operating at a still higher speed.

If this is the kind of performance *you* want, specify Warren on your next pump replacements or additions.

"A Warren Recommendation is Never a Compromise."

WARREN PUMPS

Warren Steam Pump Co., Inc., Warren, Mass.

consisting as it does of 84.9% of the tonnage, and we confidently hope the few companies who are not now members, will join this week.

As we get further into this third year of War, controls are destined to get tighter and things will happen faster. The success of your industry will bear close relation to its ability to think collectively.

Paper Mill Supply Dealers Banquet

The New York Association of Dealers in Paper Mills' Supplies held its annual banquet Tuesday evening, February 15 at the Hotel Commodore. The gathering was one of the largest ever held by the association. After a fine dinner a pleasant entertainment followed for which the committee of arrangements deserves great praise.

The following companies had tables:—Sol Ash, Atlantic By-Products Company, Atterbury Brothers, Inc., Barone Brothers Salvage Corporation, D. Benedetto, Inc., Robert Blank, Alfred Bloch & Co., Charles J. Browne, Contasano Brothers, Inc., John H. Carlo & Sons, Inc., James Carrano's Sons, Inc., Robert S. Carraway, Castle & Overton, Inc., Conti-Williams Corporation, Crosby Paper Stock Company, Inc., Darmstadt, Scott & Courtney, Delia Waste Products Corporation, Derrico Company, Inc., Economy Baler Company, Eolio Corporation, Federal Waste Paper Corporation, S. J. Fisher, Inc., Gaccione Bros. & Co., Inc., Goldman Harris Company, Louis Gottlieb & Co., Inc., Frank Graeney, Great Eastern Packaging and Paper Stock Corporation, John D. Greco, Inc., W. J. Green Company, Inc., Hemingway Company, Daniel H. Hicks, Inc., Hicks-Costarino Company, Inc., I. Hershman & Co., Inc., A. Imperatrice & Sons, Inc., E. J. Keller Company, Inc., Kelly & Co., Loumar Textile By-Products, Inc., Charles Maronna & Co., Inc., Master Waste Materials, Inc., N. Mastronardi's Sons, Inc., Melrose Salvage Corporation, George W. Miller & Co., Inc., L. & R. Moelis, Alfred J. Moran, John L. Nielsen, Panariello & D'Aniello, Martin Patricoff, Rag Processing Corporation, R. Rava & Sons, Wm. J. Rooney, Rosenberg, Waldman & Cohen, S. Schapiro & Sons, Inc., Shapiro Waste Materials Company, Hon. Joseph T. Sharkey, William Steck & Co., Inc., Sterling Mill Supply Company, Inc., Harry Stone, Toga Paper Stock Company, Inc., Valva Paper Stock Company and Whaling Waste Products Company.

The banquet committee was composed of Walter H. Martens, chairman; John L. Nielsen and Arthur Rosenfeld.

The officers of the association are as follows:—President, John L. Nielsen; first vice-president, Gus R. Holm; second vice-president, Paul J. White; secretary-treasurer, Alfred J. Moran.

Writing Paper Mfrs. Association

At the 83rd annual meeting of the Writing Paper Manufacturers Association held at The Waldorf-Astoria on Tuesday morning, February 15, 1944, the following officers were re-elected: President, J. D. Zink; vice president, H. H. Hanson; vice president, M. D. Bardeen; executive secretary and treasurer, M. C. Dobrow; assistant secretary, G. V. Johnson.

Executive Committee: J. D. Zink, Chairman, Strathmore Paper Company, West Springfield, Mass.; H. R. Baldwin, Hammermill Paper Company, Erie, Pa.; M. D. Bardeen, Lee Paper Company, Vicksburg, Mich.; G. H. Beckett, Beckett Paper Company, Hamilton, Ohio; H. V. Burgee, Parsons Paper Company, Holyoke, Mass.; D. D. Coffin, C. H. Dexter & Sons, Inc., Windsor Locks, Conn.; Bruce Crane, Crane & Company, Inc., Dalton, Mass.; I. N. Esleeck, Esleeck Manufacturing Company, Turners Falls, Mass.; W. J. Garrity, The Munising Paper Company, 135 South LaSalle street, Chicago, Ill.; A. C. Gilbert, Gilbert Paper Company, Menasha, Wis.; H. H. Hanson, W. C. Hamilton & Sons, Miquon, Pa.; T. A. Hendry, The Mead Corporation, 230 Park avenue, New York, N. Y.; J. E. Holmes, Chemical Paper Manufacturing Company, Holyoke, Mass.; E. A. Oberweiser, Fox River Paper Corporation, Appleton, Wis.; E. C. Reid, American Writing Paper Corporation, Holyoke, Mass.; A. C. Remley, Nekoosa-Edwards Paper Company, Port Edwards, Wis.; F. H. Savage, International Paper Company, 220 E. 42nd street, New York, N. Y.; W. B. Zimmerman, The Maxwell Paper Company, Franklin, Ohio.

Alternates: R. S. Madden, Valley Paper Company, Holyoke, Mass., A. P. Story, Chillicothe Paper Company, Chillicothe, Ohio.

At the meeting of the Cover Paper Group of the Writing Paper Manufacturers Association held on Wednesday, February 16, 1944, W. W. Langtry was re-elected Chairman of the Group, together with a governing committee consisting of the following: W. W. Langtry, chairman, District of Columbia Paper Mills; M. A. Park, vice chairman, the Marvellum Company; G. H. Beckett, the Beckett Paper Company; A. E. Frampton, Hammermill Paper Company, R. H. Morrill, Chemical Paper Manufacturing Company.

Association of Pulp Consumers

At the annual meeting of the Association of Pulp Consumers, Inc., held February 16 at the Waldorf-Astoria Hotel, New York, the following directors were elected to serve for three years; following the custom of the past no directors were reelected to succeed themselves:

Robert G. Fairburn, president, Berst-Forster-Dixfield Company, Plattsburg, N. Y.; Walker Hamilton, vice president, Riegel Paper Corporation, New York, N. Y.; Maxwell D. Bardeen, president and general manager, Lee Paper Company, Vicksburg, Mich.; George K. Ferguson, president and general manager, Watervliet Paper Company, Watervliet, Mich.; Thomas Morriss, vice president, Central Fibre Products Company, Inc., Chicago, Ill.

William M. E. Roberts, secretary of the Fox River Paper Corporation, Appleton, Wis., was elected to fill the unexpired term of Major Richard F. Bellack, who is now in the Service.

The Directors who continue in office are:

Norman P. Greenway, vice president, Robert Gair Company, Inc., New York, N. Y.; F. E. Brown, vice president and treasurer, Manchester Board and Paper Company, Inc., Richmond, Va.; P. E. Hodgdon, president, treasurer and general manager, Deerfield Glassine Company, Monroe Bridge, Mass.; Joseph E. Holmes, president and treasurer, Chemical Paper Manufacturing Company, Holyoke, Mass.; L. J. Long, vice president and general manager, The Crystal Tissue Company, Middletown, Ohio; George F. Moxley, general manager, West Jersey Paper Manufacturing Company, Camden, N. J.; Robert R. Richardson, secretary Gardner-Richardson Company,

Flexibility

Our 78 years of service to the Paper Industry have included more than one period when, despite raw material limitations, ingenuity has enabled us to keep our paper manufacturing and paper converting customers always supplied with high quality products.

Flexibility has continuously been our watchword. And so, although some of our standard starches, gums and dextrines may not be readily available at all times, our Paper Laboratories have developed alternate materials to serve the same purposes. Working with our field staff of paper technicians, our Paper Laboratories are ready to help you solve your sizing, calender, coating and adhesive problems.

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Middletown, Ohio; Dwight L. Stocker, president and general manager, Michigan Paper Company of Plainwell, Plainwell, Michigan; Austin P. Story, president and treasurer, The Chillicothe Paper Company, Chillicothe, Ohio.

Following the annual meeting, the Directors met and elected the following officers: President, Dwight L. Stocker, president and general manager, Michigan Paper Company of Plainwell; vice president, Robert G. Fairburn, president, Berst-Forster-Dixfield Company; secretary-treasurer, C. V. Maudlin.

Sulphite Paper Mfrs. Association

At the annual meeting of the Sulphite Paper Manufacturers Association held Monday, February 14 at the Waldorf-Astoria Hotel, New York, Edgar W. Kiefer, president of the Port Huron Sulphite and Paper Company, Port Huron, Mich., was reelected chairman. Other officers elected were as follows:—Vice-chairman Bleached Group, Fred P. Pandow, Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis.; vice-chairman Unbleached Group, George Stuhr, Southern Kraft Division of International Paper Company, New York; vice-chairman Manila Group, Rufus L. Sisson, Jr., vice-president, Racquette River Paper Company, Potsdam, N. Y.; vice-chairman Machine Glazed Group, Wayne A. Brown, Crown Zellerbach Corporation, New York.

The above officers together with the following constitute the new Board of Governors:—Fred W. Cole, general sales manager, Fraser Industries, Inc., New York; Jack B. Cowie, sales manager, Hollingsworth & Whitney Company, New York; Gilford F. Henderson, sales manager, Paper Division, Brown Company, New York; Neil E. Nash, assistant to president, Nekoosa Edwards Paper Company, Port Edwards, Wis.; John Stevens, Jr., vice-president, Marathon Paper Mills Company, Rothschild, Wis. and Rufus I. Worrell, Mead Company, New York.

Newsprint Mfrs. Association

The Newsprint Manufacturers Association of the United States, Inc. elected the following officers at the annual meeting held in New York City February 15: Harold S. Smith, president; J. D. Zellerbach, vice president; Royal S. Kellogg, treasurer; E. D. Merchant, secretary.

The directors elected were: Harold S. Smith, Maine Seaboard Paper Company; John L. Hobson, St. Croix Paper Company; Samuel Pruyn, Finch, Pruyn & Co.; J. D. Zellerbach, Crown Zellerbach Corporation; E. L. Kurth, Southland Paper Mills, Inc.; John H. Smith, Hawley Pulp and Paper Company.

Dr. E. O. Merchant, newly elected secretary, replaces Louis W. Adams, who has resigned to join Electro Rust-Proofing Corporation of Dayton, Ohio. Dr. Merchant is also secretary of the Groundwood Paper Manufacturers association and the Salesmen's Association of the Paper Industry. Counsel for the association is Ten Eyck R. Beardsley of 60 Beaver Street, New York City.

Specialty Paper and Board Affiliates

The Specialty Paper and Board Affiliates held a luncheon Wednesday at the Waldorf-Astoria at which H. S. Lewis, of the J. P. Lewis Company presided. David Graham and J. L. Madden of the War Production Board spoke respectively on wood pulp and pulpwood. E. W. Tanker, secretary of the American Paper and Pulp Association spoke on the general pulp and paper situation.

The following were elected to the executive committee of the Specialty Paper and Board Affiliates at the general meeting, held Wednesday, February 16, in the Perroquet Suite, Waldorf-Astoria:—

H. S. Lewis, the J. P. Lewis Company; S. B. Sutphin, the Beveridge Paper Company; P. R. Bachman, Riegel Paper Corporation; A. K. Nicholson, Hollingsworth & Vose Company; Walter B. Sheehan, Missisquoi Corporation; Kendall Wyman, Champion Paper and Fibre Company; T. Stewart Foster, Foster Paper Company, Inc.; G. E. O'Connor, Mohawk Paper Mills, Inc.; J. B. Cowie, Hollingsworth & Whitney Company; W. S. Gamble, Brownville Board Company; F. C. Ash, Oswego Falls Corporation; H. C. Johnson, The Sorg Paper Company; Malcolm B. Lowe, Lowe Paper Company and Maurice A. Park, The Marvellum Company.

Officers will be elected at the March meeting.

Coated and Processed Paper Assn.

The Coated and Processed Paper Association gave a luncheon and held its annual meeting at the Hotel Commodore on February 14. C. W. Browne, editor-in-chief of Modern Packaging gave an address on "Crystal Gazing in the Packaging Field".

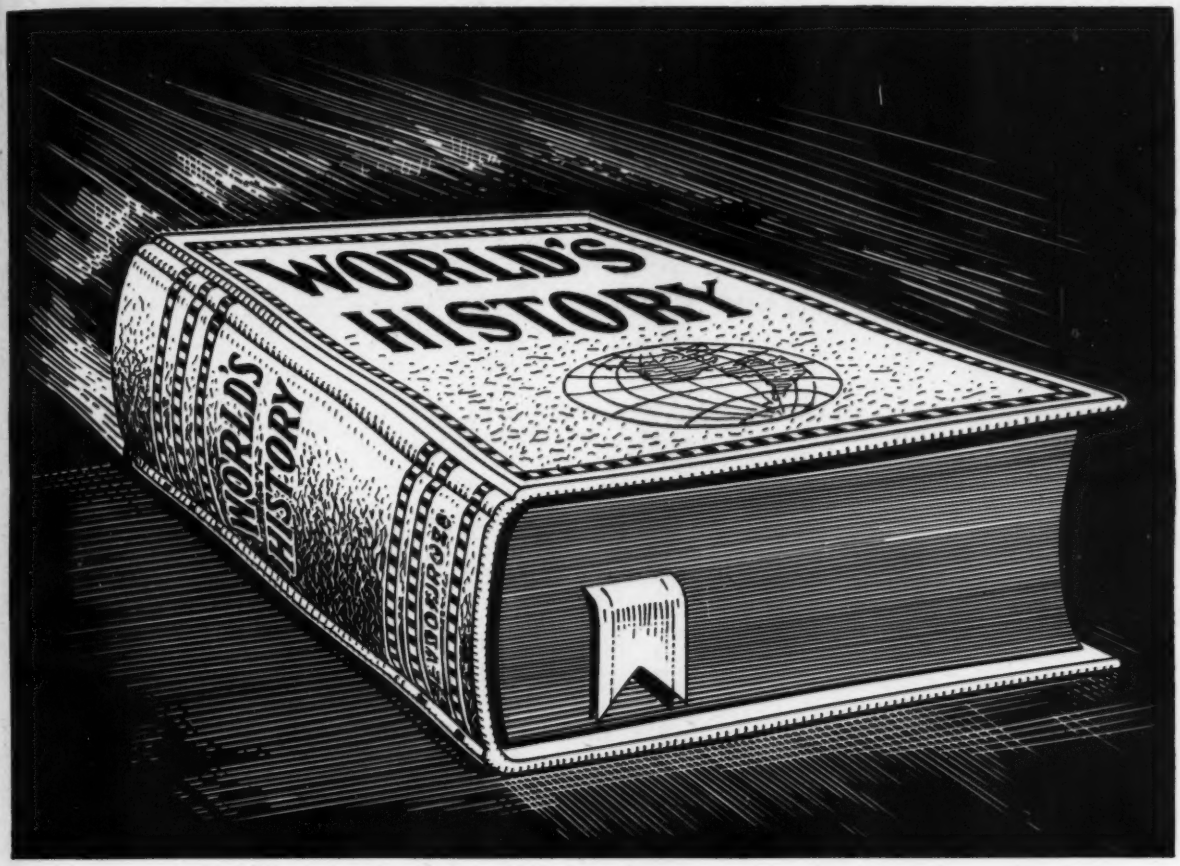
The following officers were elected:—President, John N. Hazen, Hazen Paper Company, Holyoke, Mass.; vice-president manufacturing division, James T. Cronk, Hampden Glazed Paper and Card Company, Holyoke, Mass.; vice-president merchandising division, Ralph H. Laue, Bradner Smith & Co., Chicago, Ill.; executive director and treasurer, Arthur A. Thomas.

George J. E. Buell of Charles W. Williams & Co., Inc., New York, was elected as merchandising member of the executive committee and Harry B. Conklin of Louis Dejonge & Co., New York as a manufacturing member. The other members of the executive committee are: William B. Snow, Middlesex Products Corporation, Cambridge, Mass., and Samuel Lachman, Lachman-Novasel Paper Company, New York. The arbitration committee consists of chairman, Sam R. Fry, Wyomissing Glazed Paper Company, Reading, Pa.; Charles Hoffman, Hughes & Hoffman, New York; Paul L. Houston, Marvellum Company, Holyoke, Mass.; Leo R. McDevitt, Blackstone Glazed Paper Company, Pawtucket, R. I. and Charles Matthias, Matthias Paper Corporation, Philadelphia, Pa.

Waterproof Paper Group

The Waterproof Paper Group met at the Waldorf-Astoria, February 14 and elected J. D. Griffin, Scutan Division, Union Bag and Paper Corporation, chairman of the executive committee and F. P. Wood of the Simplex Paper Corporation as vice-chairman.

Other officers are—Managing director, Philip O. Deitsch, 19 W. 44th street, New York. Executive committee members: Otis Angier, Angier Corporation; Arthur M. Anderson, Sisalkraft Company; F. E. Donovan, Specialty Converters, Inc.; J. F. Doyle, Arkell Safety Bag Company; J. D. Young, Edgewater Paper Company. Alternate members of executive committee: W. W. Rowe, Cincinnati Industries, Inc.; W. G. Cowan, Ruberoid Company.



WHEN THE BOOK IS CLOSED!

MIGHT cannot conquer righteousness. A simple rule, but a world-old one proven many times. Pray the day be soon that the principles of the government of the United States of America will be recognized and practiced throughout the global earth. Under this system of government all men have prospered in the advancement of industry and science. Gradually the diversification of the many needs of mankind not only required but demanded specialization.

Thus the BAGLEY AND SEWALL COMPANY, a century old organization, has come to be recognized as a specialist in the building of paper-making equipment. And when the book is closed on this conflict to retain the principles of freedom for all men and we return to normal competitive markets, the records for dependability and production of BAGLEY AND SEWALL machines and equipment plus a present broad program of research and development will be available to the paper industry. A frank discussion of your post-war planning is even now recommended.

THE BAGLEY AND SEWALL COMPANY : WATERTOWN, NEW YORK

National Paper Trade Association of U. S. Elects R. M. Harris President

The National Paper Trade Association of the United States held its Forty-first annual convention at the Waldorf-Astoria Hotel, New York, February 14-16 inclusive. It was a war conference meeting, largely attended and with several featured speakers.

At the annual meeting on Wednesday, the following officers were elected: president, R. M. Harris, The Alling & Cory Co., Rochester, N. Y.; vice-president in charge of Fine Paper Division, A. W. Towne, Blake, Moffitt & Towne, San Francisco, Cal.; vice-president in charge of Wrapping Paper Division, G. E. Carpenter, Carpenter Paper Company, Omaha, Neb.; treasurer, J. O. Bulkley, Bulkley, Dunton & Co., New York; executive secretary, A. H. Chamberlain, 220 East 42nd street, New York.

The special speakers at the opening session on Monday included the Hon. Philip J. Philbin, member of Congress from Massachusetts; E. R. Gay, Director, General Commodities Division, Office of Civilian Requirements, War Production Board, and Lieut. Col. J. K. Javits, Chemical Warfare, U. S. Army, counsel for the association.

Address of Congressman Philip J. Philbin

Congressman Philbin recently introduced the Philbin Bill (H. R. 4000), which included provision for draft deferment for registrants employed in the forest industries, harvesting lumber and pulpwood. He referred to Senate Bill 1701, introduced by Senator Brewster of Maine, as a disheartening incident which, although sincerely motivated, would effectively annul the advantages of the Philbin Bill.

I readily concede that Selective Service Boards have the power to defer labor, Congressman Philbin declared. But the fact of the matter is that up to this time they have scarcely used this power at all, so far as woods labor is concerned, with the result that hundreds of thousands of essential workers have been drafted from the woods, and others now most vital to the continuance of operations, even at present reduced scales, are certain to be drafted in the future.

We want action, the kind of action that will bring results now in the form of deferments for substantial numbers of workers in timber, pulpwood and collateral woods activities.

Address of E. R. Gay

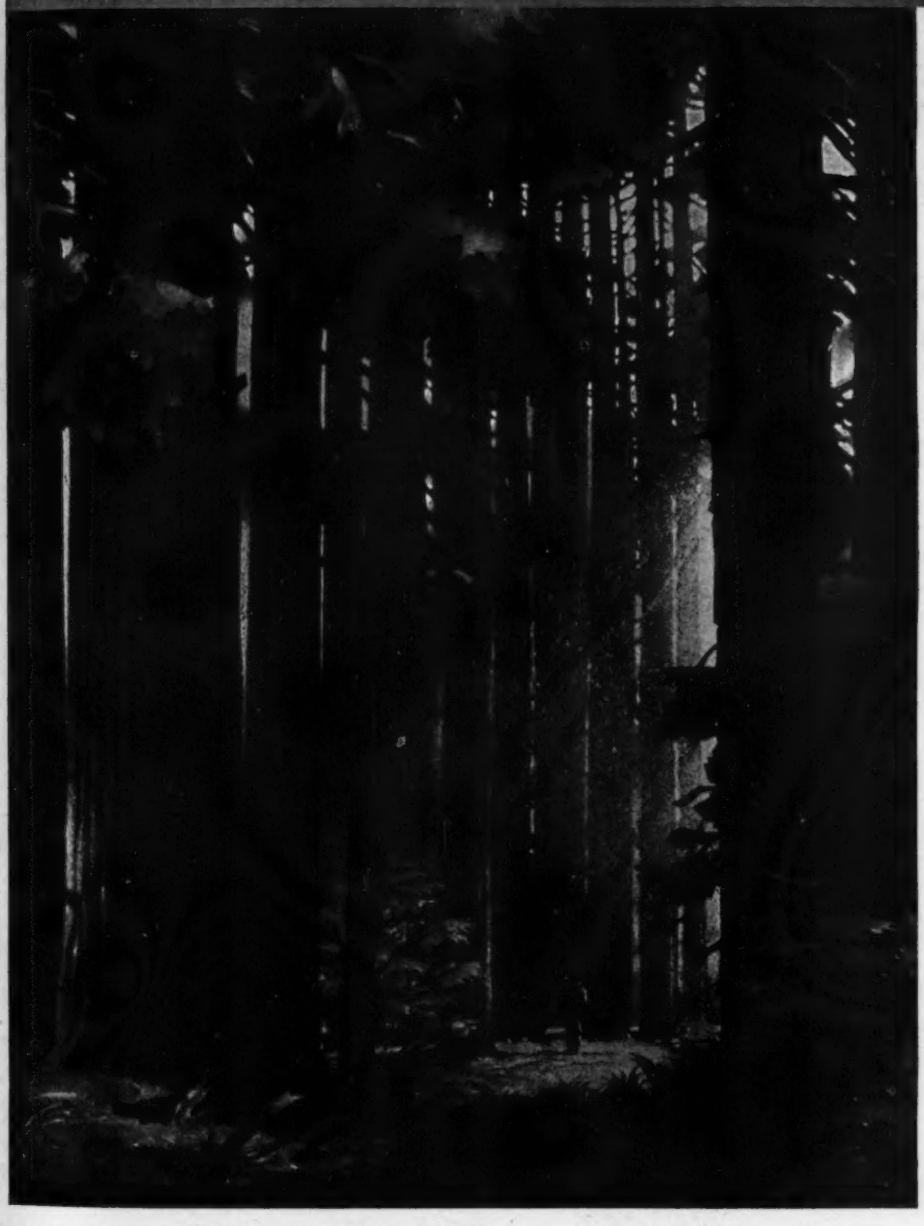
In his address E. R. Gay, Director, General Commodities Division, Office of Civilian Requirements, WPB, stated that the critical short supply of paper may become worse and there is little hope for early improvement. He pointed out that paper production has been attained at the expense of inventories and today the reserves are consumed. "We are faced with the necessity of balancing our production of paper this year with the production of pulpwood and waste paper, which means a greater relative reduction in the availability of paper than the anticipated drop in pulpwood output would otherwise require."

Mr. Gay said that kraft wrapping paper and new fiber containers would be scarce, although manufacturers and users of paper have experienced surprisingly little hardship thus far. The speaker declared that inventories are now at a low level and we "can draw no more checks on the bank but must live on our income" of currently produced paper. He urged economy in the use of paper and paper board but said that no one should be denied the paper that is absolutely needed. Paper is essential for the sanitary conduct of many services, such as laundries in which to wrap clothes. If women war workers cannot obtain laundry protected by paper wrappings, it will increase

R. M. Harris
President

A. H. Chamberlain
Secretary

WEST COAST HEMLOCK PULP



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PULP DIVISION ♣ WEYERHAEUSER TIMBER COMPANY

absenteeism, for the women will remain at home to do their own laundry work. Habits of economy are not likely to persist after the war, however, and the normal laundry services of the past will be resumed, Mr. Gay said.

The speaker said he believed Federal regulations were equitable because no one was satisfied. Some merchants have gone so far as to ask that the War Production Board require mills to ship them paper. Evidently they did not recognize the significance of this request, which would mean direct allocation of paper. Stricter controls are inevitable, Mr. Gray said, unless substantially greater conservation measures are put into effect by business. Less than 1% of the total production of paper is consumed in non-essential uses, the speaker said, but still there is considerable waste and paper merchants should strive to impress upon their customers the necessity of greater conservation of the nation's paper supply.

Address of Lieut. Col. J. K. Javits

It is three years now since I attended a convention of the Association and it is good to be back with you again. Man is a restless creature always seeking change. It is good to know that you have held together and carried on through the trials of the last few years. Many times we have spoken together of the value of your unity giving you a common voice, and in a sense a disinterested voice in things which affected you as—an industry. We built and planned for these times together in the years of peace. I hope your associations proved to be a place of strength and light when these times were reached—at least a home in which to meet on common ground.

I am sorry that I have not been here to see your plans put to the test, but there was other work to do. I hope at the very least that your faith in the power of good of your associations was reaffirmed—and that although they were not perfect they showed themselves again to be invaluable. For I have always maintained that the hopes of mankind lay in the ability to work together, subordinating personal interest to the common good, knowing that this was best for him as an individual, too—because of what use is it to him if he amass all the wealth there is with only a pigsty to spend it in. Carlyle wrote in his "History of the French Revolution" about how the French nobles, as the revolution drew near, drove through the streets of Paris in fine clothes and elegant coaches holding their noses to keep out the stench and drawing their cloaks to keep out the mud.

To be away for a time in the service of the nation is not only to have the privilege of serving in an hour of peril but to come face to face with any truths as well. There is an objectivity about it which cannot possibly be attained in the preoccupations of business or professional life. I come to you most humbly as an intermediary to tell you something of what I have seen and experienced and to tell you what I believe it to mean. I am no war hero, nor do I pretend to speak for the soldier. I know only that what those fine young men have suffered to make no life worth living which is not dedicated to the creation of a better world for them; what those young men have died for imposes a solemn personal obligation on every one of us here.

So many experiences which demonstrate this come to mind. My general and I spent a full day at a bomber station in England. We ate at mess with the men before they went on their mission, we saw them take off, we met them as their planes returned and had a late snack with them while they talked. They went right out of a peaceful English countryside into a battle and came back to that same countryside all in a matter of hours. My general who was going through his second war was amazed at their composure, the shock he said, was unbelievable, going into battle right off with no acclimatization whatever and continuing to do it day after day. Those boys were not only composed, they were good natured, easy and friendly, too. They were in the best tradition of our nation.

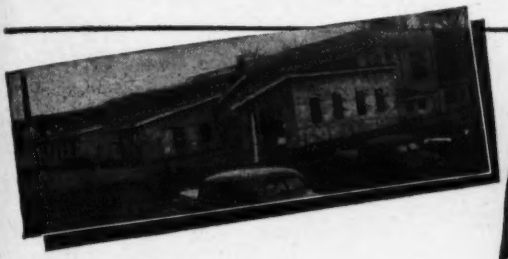
Abstract discussion about the possibilities inherent in the totalitarian system, the order of which it claims to be capable, the discipline, the devotion it evokes to the state must stop at the first glimpse of it in action. As I travelled through the towns of Sicily and southern Italy but recently released from the invader, I saw this played out as upon a stage. Physical conditions of food and shelter, of public services and of community life could not so soon after the entry of our forces be much improved; but people were walking about in the sun talking and smiling, children played in the streets, shutters were open and laundry hung out to dry. The black cloud had receded and the sun was out again. It was no longer necessary to peep from behind shuttered windows and to keep the children indoors. The heavy hand of tyranny was lifted from life. The people almost blinked a little as if suddenly released from the night. Here was no treatise on political economy, only the simple living fact. How this is attributable to the spirit of life which our forces bring wherever they go is illustrated by two pictures. One of American soldiers shopping. The other of Signal Corps boys stringing wires and playing with the local kids at the same time.

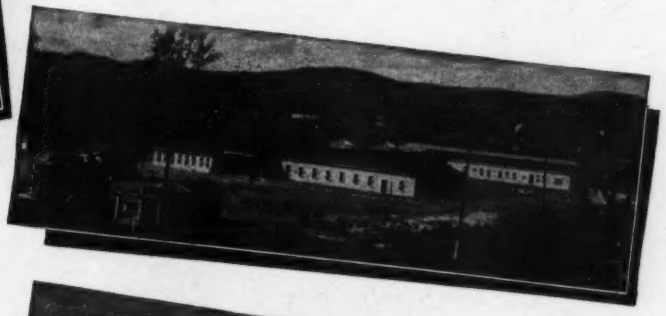
Our soldiers are the most inveterate shoppers in all the world. They are no sooner in a town before they are out to buy it up. I really believe that the final patrols which mop up must be very popular because the boys can decide where there are the biggest bargains and get there first. And they buy for cash and pay for what they buy. Goods long buried in towns the Germans thought they had thoroughly sacked came out like magic. This is life and morality and decency at work.

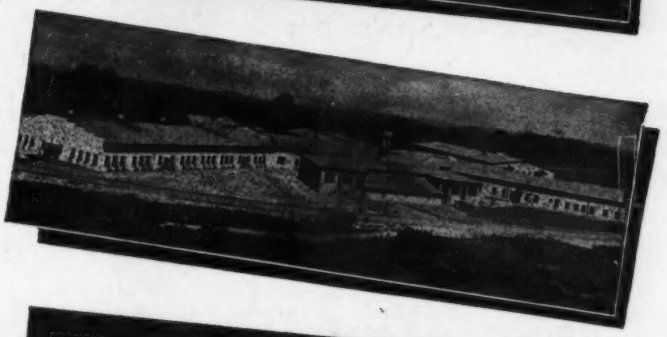
The experience with the Signal Boys is just as typical. Here was a crew stringing wire through the streets of an Italian city, very recently occupied by the Germans and still quivering from the pain of its ordeal. A group of ragged kids were watching the wire being strung. Every once in a while a soldier turned around and makes a wisecrack at a kid or a grimace. The kids did not understand, but they knew a friend when they saw one and they grinned happily back.

One of the last things my general and I did before returning was to have lunch in the field at a place which must be unnamed with a battalion commander and his staff. We ate in an olive grove on the side of a mountain overlooking the sea. All the faces of the battalion officers were young, hard and tanned. The talk was of the battalion, how well trained it was, how enthusiastic, what a fine bunch of men and officers, and what a punch its weapons had. The company commanders were from New England, the South and the West, they were modest and spoke quietly—no one got redheaded and no one was

Your Answer...Here?







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alarmed. That went for strikes, objections to taxes, high wages and kicks about rationing. Everybody spoke his mind freely. They knew the country was sound and was coming out all right and they were not worried. They had a job to do and they wanted to do it right and get back home.

Every one of those boys was killed a few weeks later. That left a deep dent in our world which they meant for us to fill.

Proposed Cut in Inventories

Speaking before the Wrapping Paper Division on Tuesday, W. G. Seathers, assistant secretary of the National Paper Trade Association said in part:

Wrapping paper shipments, Mr. Leathers explained, will amount to approximately 50% of normal operations. Since inventories are practically exhausted, he added, the curtailment in shipments will be greater than production figures disclose. Towels, he continued, will be shipped at 90 per cent of the 1942 rate, with shipments to industrial users improved at the expense of household consumers. Toilet tissues, he said, will be shipped at the 1942 rate, while facial tissues and napkins are expected to lose considerable tonnage.

Efforts must be made by the industry to put into use the greater part of the inventories held by consumers, such as schools, hospitals and other institutions, Mr. Leathers stated. Pointing out that such users usually maintain six-month inventories at a minimum. Mr. Leathers stated that paper product distributors must convince such users that their inventories must be brought down to a level of thirty days before additional small orders can be considered. Such a program, he declared, has the backing of the War Production Board.

Paper Makers Advertising Association

Hubert Foster, the Mead Corporation, was elected president of the Paper Makers' Advertising Association at the twenty-ninth annual meeting of the organization, held February 14 at the Hotel Lexington, New York. He succeeds Maurice A. Park of the Marvellum Co. and has as associates on the new board the following:

Richard A. Faulkner, International Paper Company, Eastern vice-president; Frank L. Blake, Kimberly-Clark Corporation, Western vice-president; Floyd L. Triggs, Riegel Paper Corporation, treasurer, and Bradley E. Stafford, Strathmore Paper Company, secretary. The members of the executive committee will be named later after President-elect Foster has had opportunity to consult his fellow officers.

Mr. Park, who has served three years as president and previously for six years was treasurer of the organization, presided at the annual luncheon and introduced one of the club's former presidents, C. Walter Dearden of Butler-Dearden Paper Service, Inc., Worcester, Mass. who told an interesting story of the club's earlier history.

Blotting Paper Mfrs. Association

The Blotting Paper Manufacturers Association which held its annual meeting Monday, February 14, at the Waldorf-Astoria, New York, elected the following officers: President, Graham Carlton, Standard Paper Manufacturing Company, Richmond, Va.; vice-president, Joseph Hallowell, Wrenn Paper Company, Middletown, Ohio and secretary-treasurer, R. L. Winget, New York.

U. S. Pulp Producers Association

The United States Pulp Producers Association held its annual meeting February 13 at the Waldorf-Astoria Hotel, New York and elected the following executive board for 1944:—

Regional Directors—New England, Amor Hollingsworth, Penobscot Chemical Fibre Company; Middle Atlantic, Norman W. Wilson, Hammermill Paper Company; South, Stuart E. Kay, International Paper Company; Lake States, Stuart B. Copeland, Northwest Paper Company; West Coast, Robert B. Wolf, Pulp Division, Weyerhaeuser Timber Company.

Directors at Large—Alexander Calder, Union Bag and Paper Corporation; Downing P. Brown, Brown Company; J. M. Conway, Hoberg Paper Mills; U. M. Dickey, Soundview Pulp Company; M. B. Houston, Rayonier, Inc.; Lawson Turcotte, Puget Sound Pulp & Timber Company.

Executive Director—Oliver M. Porter, 122 East 42nd street, New York.

Tag and Ticket Advisory Committee

An organization meeting of the Tags, Pin Tickets and Marking Machine Tickets Industry Advisory Committee was held at the Regional Office of Price Administration, Empire State Building, New York, Tuesday February 15. The committee, recently appointed by Chester Bowles, OPA Administrator, is composed of manufacturers of tags, pin tickets and marking machine tickets.

At Tuesday's meeting, the following officers were elected: Chairman, W. C. Bailey, Jr., president of the Reyburn Manufacturing Company, Philadelphia; vice chairman, R. A. Maish, director Dennison Manufacturing Company, Framingham, Mass.; secretary and treasurer, Frank H. Baxter of Frank H. Baxter Associates, 370 Lexington avenue, New York. OPA was represented by Horace W. Johnson, and Henry J. Stein of the Paper and Paper Products Branch of the National Office.

Ground Wood Paper Mfrs. Association

The Ground Wood Paper Manufacturers Association held its annual meeting of the Waldorf-Astoria Monday, February 14 and elected the following officers: president, Paul A. Mahony, International Paper Company; Eastern vice president, Fred Cole, Fraser Industries; Western vice president, George H. Fay, Mead Sales Company. Board of Governors, E. G. Murray, St. Regis Paper Company; and James H. Foy, Flambeau Paper Company; executive vice president, Robert E. Canfield; secretary treasurer, Dr. E. O. Merchant.

Writing Paper Mfrs. Association

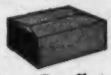
At the meeting of the Bristol Board Group of the Writing Paper Manufacturers Association held on Monday, February 14, 1944. Norman Harrower was elected Chairman of the Group, together with a governing committee consisting of the following: Norman Harrower, chairman, Linton Bros. & Co.; Kendall Wyman, vice chairman, Champion Paper & Fibre Company; J. E. Holmes, Chemical Paper Manufacturing Company; R. M. Swaney, Franklin Paper Company; H. W. Tunstall, Wheelwright Papers, Inc.

DID YOU KNOW?

NATIONAL

supplies large quantities of
ADHESIVES & STARCH PRODUCTS

for winding fiber Shell Containers



for packaging Small Arms Ammunition

for insulating Armored Tanks

for fabricating fiber Oil Filters & Motor Gaskets

for sizing duck Gun Covers

for making Rifle Envelopes

for binding sand Molds & Cores used in casting Gun Mounts, etc.

for assembling Fuses & Grenades

for laminating paper Bomb Rings

for sealing & labeling fiber Export Cases of Parts & Supplies

&

for many other ordnance applications . . . some of a secret nature . . . which contribute to the fire-power of our fighting forces.

THE U. S. ARMY
ORDNANCE DEPARTMENT
provides the FIREPOWER!

THE COURAGE and bravery of our ground and air forces would be costly and ineffective were it not for the weapons and mobility provided by Army Ordnance.

In no other war agency could a deadline failure in the production or shipment of needed guns, ammunition and automotive equipment mean so much to the safety of our boys on the battlefronts, and to the cause for which they are fighting.

National is proud of the high trust that is placed in its adhesives and starch products for such vital war applications as those shown at the left . . . and eager to give first call on its research, service and production facilities to the needs of our armed forces.

Number 2 of a Series

NATIONAL STARCH PRODUCTS
INCORPORATED
270 MADISON AVENUE, NEW YORK 16, N. Y.

PLAINFIELD, N. J. • PHILADELPHIA, PA. • BOSTON, MASS. • CHICAGO, ILL. • INDIANAPOLIS, IND. • SAN FRANCISCO, CAL.

TAPPI Holds Post-War Horizons Meeting

Vance P. Edwardes of International Paper Co. Is Elected To Head Technical Association At 29th Annual Convention — Reports Show That the Association Has Closed An Unusually Successful Year.

The Technical Association of the Pulp and Paper Industry stressed post-war problems at its 29th annual convention at the Commodore Hotel, New York, February 14 to 17 inclusive. Vance P. Edwardes, sulphite superintendent of the International Paper Company, Palmer, N. Y., was elected president of the association for the ensuing year. Gunnar W. E. Nicholson, resident manager of the Union Bag and Paper Company, Savannah, Ga., was elected vice president and the following were elected to the executive committee to serve for a term of three years:— F. W. Brainerd, research and development supervisor, Scott Paper Company, Chester, Pa.; Pierre Drewsen, chemical engineer, Hinde & Dauch Paper Company, Sandusky, Ohio; Kenneth P. Goehegan, chemist, Aetna Paper Company, Dayton, Ohio; John C. Nutter, mill manager, Gair Company Canada, Ltd., Toronto, Ont. Wilbur F. Gillespie, technical director, Gaylord Container Corporation, Bogalusa, La., was elected to the executive committee to serve for a term of two years.

Reports showed that the Association has closed a very successful year, having substantially increased its membership, improved its financial position and prospered generally.

GUNNAR W. E. NICHOLSON
Vice President

President's Address

R. A. Hayward, the retiring president of the association, delivered his address at the opening session of the convention on Monday as follows:—

My term of office as president of the association will expire at the end of this convention. I presume that my report should cover a record of the activities of the Association during the past two years and suggestions for the immediate future. These suggestions might be considered as "unfinished business" where time and effort have not been available to achieve them during the past year.

A PROCESS OF EVOLUTION

Undoubtedly every individual and every organization holds some definite opinion about the association and the program that it should carry on. Before taking office, I, too, held many positive convictions and felt that some rather radical changes should be made in the organization in order to improve its service. As I became more familiar with the extent of the program and the nature of it, I began to realize that the association itself is an evolving organization.

VANCE P. EDWARDES
President

R. G. MACDONALD
Secretary-Treasurer

LONGER LIFE

For Equipment!

Cut Maintenance Costs—Use Industrial Chromium Plating

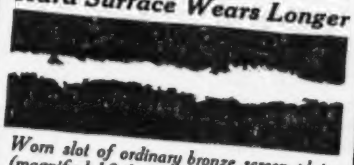
CRODON's exceptionally efficient protection against wear and corrosion insures substantial savings in your maintenance costs. Because chromium is the hardest commercial metal and completely non-corrosive, CRODON-plating prolongs the normal life of your equipment and reduces expenses incurred by frequent replacements, operating delays and interrupted production.

CRODON-plating's unusually smooth, hard, easily cleaned surface. It also offers remarkable freedom from product contamination. Its new-equipment performance endures for surprisingly long periods.

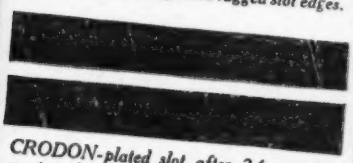
Look for the trademark CRODON — it assures you of the best in chromium plate. It guarantees top quality applied in the most practical, economical way — for behind every CRODON application are the expert knowledge, experience and resources of America's largest and oldest industrial chromium plating organization.

Let us show how CRODON-plating can help you solve your maintenance and cost problems.

Hard Surface Wears Longer

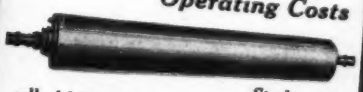


Worn slot of ordinary bronze screen plate (magnified 10 diameters) after 10 months' service, showing rough and ragged slot edges.



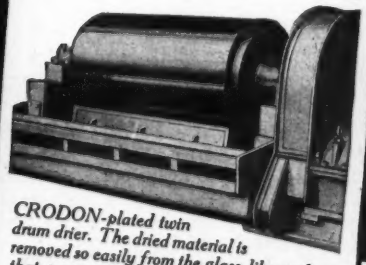
CRODON-plated slot after 24 months' service. Note permanent slot accuracy, absence of wear and smoothness of slot edges.

Corrosion Resistance Cuts Operating Costs



Steel couch roll, 116 inches long — 20 inches diameter, CRODON-plated to resist corrosion.

Smoothness Insures Better Quality Product



CRODON-plated twin drum drier. The dried material is removed so easily from the glass-like surface that power consumption is greatly reduced and scraper knives last many times longer.

CRODON PLATING pays

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346 Huntingdon Avenue, Waterbury, Conn. | 1760 Lakeview Road, Cleveland, Ohio | 4645 West Chicago Avenue, Chicago, Ill.

Great progress and many changes and adjustments have developed in the past twenty-five years. This process of evolution will unquestionably continue year after year, and the program will be gradually adjusted to meet changing conditions. It has not seemed advisable to institute radical changes in view of this more intimate knowledge, and it does not seem advisable to recommend to my successors that radical changes be made in the future.

Although the manufacture of paper is one of the oldest industries, the rapid technical progress that has been made in the last thirty years makes it one of the youngest and the most virile industries in our economy. The pulp and paper industry has developed into one of the major industries of the country during this period. The growth and service of the Technical Association of the Pulp and Paper Industry has paralleled this development in the industry, and we feel that the organization has assisted and led in this development.

The war has brought about thousands of new uses for cellulose products and we can look forward to even greater progress in the next twenty-five years than we have witnessed in the past. The opportunities for the industry are unlimited. Likewise, the opportunities for those associated with the industry or those entering the industry are equally unlimited.

Association Has Great Possibilities

The Technical Association has a great responsibility in the post-war period to see that the development of the industry is not limited by lack of knowledge and scientific work.

During the past two years the executive committee of the association has spent a great deal of time in trying to consolidate the work of the organization and to define its objectives. After considerable discussion, this purpose of the organization was defined as being "organized for the search and dissemination of knowledge relative to pulp and paper." This seems to clearly state the purpose of the organization but does not describe its cooperative spirit. In the search for knowledge, much of it will be found within the membership of the organization.

The organization provides the opportunity for individuals to present their organized thoughts to the industry as a whole, not only helping the industry but helping themselves as well.

Within this definition of policy, the executive committee have encouraged the development of local sections and have given aid and encouragement to them in the conduct of their programs. The executive committee feel that strong initiative should be present in the local sections and that they should not be encouraged to lean too heavily upon the national organization for direction and support.

The local section offers the opportunity for the younger men in the industry to develop themselves, and the first purpose of these local sections should be that of the development of men. If an individual wishes to improve his position with his own company or his standing in the industry, there is no better opportunity than to start by taking an active part in the work of the local sections. Individual members should be encouraged to prepare papers and present them at the meetings. It is the best training a man can receive and it offers the opportunity of developing national recognition.

Encourage Stronger Local Sections

If I were to make any recommendations for my successors, I would suggest that they encourage the local sections to become stronger and more virile organizations and that they encourage individual members to take an active part in the program. There is a danger in the local sections of the members depending upon men from without the industry for supplying the programs. There is, of course, a need for this educational work and it always has to be part of a local section program. On the other hand, it will not develop men within the industry as much as though these men accept responsibility themselves for presenting papers to the group.

The National Association program has depended from the beginning on the work of committees covering the various phases of the industry. The problem of activating this committee work has for several years been present with the executive committee. It has come up regularly for discussion at all of our meetings. Some of the committees have functioned extremely well and have made a very admirable record, and have contributed much to the advancement of the industry as well as the Association. We all owe a debt of gratitude for their efforts.

The executive committee appreciate the problems facing these various committees, the handicaps under which they work, and have tried to give every encouragement that they can toward assisting those committees which have not been as active as they might have been during this period.

Should Enlarge Central Organization

One conclusion from all these discussions can be drawn. The committee work could unquestionably be greatly assisted if the central office staff were enlarged so that someone within the central office could act as a secretary for the various committees and could help to coordinate the efforts of the individuals, keep the problems and correspondence alive, and supply the catalytic effort which is so necessary in committee activities. The central organization should be enlarged sufficiently as soon as possible in order to render this necessary assistance to the committees.

During the past twenty-five years the association has accumulated a substantial reserve fund. This reserve has been invested from time to time in various securities depending upon the conditions that existed at the time there were funds to invest.

These investments were supervised by the Financial Committee and the officers. The individual members changed every year or two so that the investment program lacked continuity and stability. The executive committee have established an Investment Committee within the organization, the members of which hold office over a longer period of time. The members of this committee are not necessarily confined to members in the Technical Association. The officers are free to select any individual best qualified to supervise investments of this nature.

Funds More Securely Invested

During the past year, while securities have been selling at a high price, it has seemed advisable to liquidate many of the speculative common stocks and to reinvest the funds in government bonds. The reserve of the Technical Association is now invested in bonds and stable securities according to the principles of a trust fund. The principal of the fund is as secure as you can hope for and the income as great as you can expect with this degree of security. The income from this reserve is a substantial help to the organization in carrying on its current program and

MAKE SURE THE TRAVERSE SPEED IS RIGHT

No definite rule can be laid down for figuring correct wheel-carriage traverse speed when regrinding a calender roll. Good judgment and experience must point the way in each individual instance. However, certain general conclusions can be drawn, which, while they should not be considered as hard-and-fast rules to follow blindly, may prove helpful to the new operator or the experienced hand who has been running into trouble.

Wheel-carriage traverse speed depends principally upon four factors: (1) wheel speed, (2) work speed, (3) degree of finish required, and (4) the action of the wheel. In general, during the roughing operation the carriage should travel a little less than the width of the wheel for each revolution of the work, to prevent a spiral being ground on the face of the roll. When finishing, carriage speed should not exceed ½ inch.

In old roll grinding machines this speed was fixed. In the more modern machines, with individual drives for the carriage and for the roll, speeds of roll and carriage can easily be changed independently, to suit the roll being ground and the finish required.

This is one of the many roll grinding problems discussed in the 32-page booklet, "A PRACTICAL GUIDE TO CARE OF CALENDERS AND CALENDER ROLLS." If you have not already written for a copy, why not do so today? Just fill out the coupon and drop it in the mail. Your copy will be sent to you free of charge, and you won't be under any obligation.

Information applies to any make of calender, roll or roll grinder. The book contains no advertising.

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Please send me a copy of your new booklet on the care of calenders and calender rolls.

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the reserve is available to finance new services until they can become self-supporting.

The reserve as it stands today should be sufficient to cover any risk that the Association may take and the Association is justified in following a policy of spending its income on improved service. With improved service, the Association should receive greater support from the industry and we should be able to look forward to an ever enlarging organization.

Cooperating With the War Effort

During the past two years the association has devoted a great deal of its time, money, and effort toward helping with the war program. The last three conventions of the association have been devoted almost exclusively to war problems. During this time the Association has started to publish the TAPPI Bulletin. The reactions generally have been extremely favorable and the efforts seem to have been appreciated. The current income of the Association justified this enlarged service.

The experience gained during this period indicates that the bulletin should be continued as a permanent part of the Association program. The bulletin, during the post war period, can be a means of reporting the work of the committees, the local sections, and a brief summary of all the scientific developments that are of interest to the pulp and paper industry. If it is to be continued in the post war period, it will be necessary to enlarge the staff of the organization in order to provide the material and to carry on the work.

During the past two years the Association has devoted a considerable amount of its time and effort to serving the paperboard industry and converting industries. These efforts should be continued and should receive the same proportional attention as that given to the production of pulp and paper. Wherever necessary the committee organization should be expanded to serve in these fields.

In the early days of the Association, a great deal of emphasis was placed upon the engineering phases of the industry. During the past few years the chemical phases of the industry have received more attention. There should certainly be no less attention paid to the scientific chemical phases of the industry in the future but it would be desirable to revise and revitalize the interest of the engineering phases.

Research Work Fostered

The Technical Association for many years has encouraged and fostered research work for the industry. This same spirit of research should exist within the Association itself and a continual research program should be carried on to see how the Association can render a more effective service to the industry as a whole.

The income of the Association comes from individuals and corporations, and should be spent in rendering a service directly to them in the broadest possible manner.

The opportunities for the pulp and paper industry in the future are unlimited. The extent to which the industry takes advantage of these opportunities will depend upon the educational programs that are carried on, preparing men to render the necessary service and the public to appreciate the service that is rendered.

There are several educational programs which should be carried on simultaneously and intensely in order to achieve the best results. The Technical Association should accept the full responsibility of carrying on the necessary educational program that will inform and inspire the men within the industry to develop the technical processes of the industry and the products that it manufactures. The association has accomplished a great deal in this direction. There is still room to extend these efforts.

There is a need within the industry for an intensified educational program to improve the knowledge of human and industrial relationships. The operations of every industry in the future are going to require more intelligent and more understanding supervision. The Superintendents' Association have recognized this opportunity and are preparing their program to meet these educational needs.

Educating the Public

The efforts of the entire industry need to be appreciated and accepted by the public. The conditions under which we operate and the extent to which we are able to serve will depend in the long run on the public opinion of the industry. The paper industry has a great responsibility in educating the public on the service it is rendering. During the past year the Salesmen's Association have appreciated the opportunity of service in this field and have taken definite steps toward organizing a program to meet these needs.

If these three educational programs are carried on simultaneously and effectively, the industry will progress far beyond our fondest dreams.

In closing, I wish to express my sincere appreciation for the privilege of serving as your president during the past year. I only wish we could report even greater progress than that which has been made.

I wish everyone could share the vision and enthusiasm for our industry that has come to me during the time that I have carried the responsibility of this office. I only wish that everyone in the industry could have this experience.

I shall be standing by, ready to help my successors in any way that I can.

Report of the Secretary-Treasurer

R. G. Macdonald, secretary-treasurer of the association delivered his annual report as follows:

The Technical Association of the Pulp and Paper Industry devoted 1943 to assisting, insofar as possible, the Armed Services and other organizations directly engaged in the war effort.

Membership

A large number of members joined the Armed Services during the year. An effort has been made to keep a record of such members and to publish their names in the TAPPI Year Book.

There were 226 individual members elected in 1943. One hundred eighty-nine members resigned or were dropped. On December 31, 1943, the total individual membership was 1926.

There were 40 corporate and 13 sustaining members elected. Two sustaining members resigned. The corporate membership on December 31, 1943, was 125, and the sustaining membership was 110.

The following companies became corporate members in 1943:

Aetna Paper Company, Dayton, Ohio; American Box Board Company, Grand Rapids, Mich.; Associated Pulp and Paper Mills, Ltd., Melbourne, Australia; Bare, D. M. Paper Company, Roaring Springs,

B&W-Tomlinson Recovery Process

For Alkaline Pulp Mills

Outstanding Leadership

82½%

of the spray-type units installed or on order, since July 1935, are B&W-Tomlinson.

50%

of the total daily pulp tonnage* in B&W-Tomlinson-Equipped Mills, represents REPEAT orders. (Based on units ordered since July 1935.)

45%

of the 80 Kraft and soda mills listed by Lockwood in 1943, are equipped with B&W-Tomlinson Recovery Process. On a tonnage basis, 50 per cent of the total alkaline capacity* (Post, 1943 edition) is B&W-Tomlinson.

B&W-Tomlinson leadership has been primarily due to four advantages: (1) Maximum chemical recovery and reduction; (2) Maximum steam production; (3) Low maintenance costs; (4) Minimum labor requirements. Mills in the United States and Canada are included in the above figures.

**Capacity is calculated on the basis of 3,000 pounds of dry solids per ton of pulp.*

THE BABCOCK & WILCOX COMPANY
85 LIBERTY STREET NEW YORK 6, N. Y.

★ BUY MORE WAR BONDS! ★

BABCOCK & WILCOX

BL-16

Pa.; Beveridge Paper Company, Indianapolis, Ind.; "Brasital" S. A., Sao Paulo, Brazil; Brown Paper Mill Company, Inc., Monroe, La.; Carew Manufacturing Company, South Hadley Falls, Mass.; Central Fibre Products Company, Chicago, Ill.; Clyde Paper Company, Rutherglen, Scotland; Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis.; Detroit Sulphite Pulp and Paper Company, Detroit, Mich.; Falls Paper and Power Company, Oconto Falls, Wis.; Federal Paper Board Company, Bogota, N. J.; Fletcher Paper Company, Alpena, Mich.; Florida Pulp and Paper Company, Pensacola, Fla.; Fort Wayne Corrugated Paper Company, Fort Wayne, Ind.; Fox River Paper Corporation, Appleton, Wis.; French Paper Company, Niles, Mich.; Hollingsworth and Whitney Company, Boston, Mass.; Hummel-Ross Fibre Corporation, Hopewell, Va.; Knowlton Bros. Company, Watertown, N. Y.; Lawrence Paper Company, Lawrence, Kansas; Mac Sim Bar Paper Company, Otsego, Mich.; Milprint, Inc., Milwaukee, Wis.; Minnesota & Ontario Paper Company, Minneapolis, Minn.; Morris Paper Mills Corporation, Morris, Ill.; National Folding Box Company, New Haven, Conn.; National Vulcanized Fibre Company, Yorklyn, Del.; New Haven Pulp and Board Company, New Haven, Conn.; Oswego Falls Corporation, Fulton, N. Y.; Parsons Paper Company, Holyoke, Mass.; Riegel Paper Corporation, New York, N. Y.; St. Helens Pulp and Paper Company, St. Helens, Ore.; Sonoco Products Company, Hartsville, S. C.; Sorg Paper Company, Middletown, Ohio; Southland Paper Mills, Inc., Lufkin, Texas; Sterling Pulp and Paper Company, Eau Claire, Wis.; Sweet Bros. Paper Manufacturing Company, Phoenix, N. Y.; Wausau Paper Mills Company, Brokaw, Wis.

The following companies became sustaining members in 1943:

Appleton Machine Company, Appleton, Wis.; De-Laval Steam Turbine Company, Trenton, N. J.; Draper Bros. Company, Canton, Mass.; Hart & Harrington, Inc., Chicago, Ill.; Knox Woolen Company, Camden, Maine; LaBour Company, Inc., Elkhart, Ind.; Meisel Press Manufacturing Company, Boston, Mass.; Nash Engineering Company, New York, N. Y.; Niagara Alkali Company, New York, N. Y.; Research Corporation, Chicago, Ill.; Sandy Hill Iron and Brass Works, Hudson Falls, N. Y.; Stauffer Chemical Company, New York, N. Y.; Swenson Evaporator Company, Harvey, Ill.

Necrology

The Association lost through death the following members:

C. M. Baker, consulting engineer; Earl E. Berry, Beloit Iron Works; G. D. Bowne, Westinghouse Electric and Manufacturing Company; C. K. Boyer, Consolidated Water Power and Paper Company; V. S. Denison, Beloit Iron Works; Charles L. Ellis, Downingtown Manufacturing Company; H. K. Ferguson, H. K. Ferguson Company; E. G. Goodell, Stevens Point Pulp and Paper Company; Paul Hodges, Crossett Paper Mills; Guy C. Howard, Marathon Paper Mills; M. B. Mount, consulting engineer; O. F. Neitzke, Hollingsworth & Whitney Company; F. H. Rosencrantz, Combustion Engineering Company; Hugo H. B. Schapiro, Ohio Boxboard Company; Harold R. Telfer, Detroit Sulphite Pulp and Paper Company; Willard Tiffany, U. S. Testing Company; H. C. Webber, Morris Paper Mills; Charles H. Wilson, Esleek Manufacturing Company.

The Association also suffered the loss of two of its able staff members, Miss Emily McClory who passed away in August, and Miss E. L. Fabriani who was killed in an automobile accident in October.

Special Reports on Manufacturing Problems

The central office handles a large number of technical inquiries daily. Although most responses can be made from the information at hand or through the cooperation of particularly well qualified members, many require considerable literature research and frequently surveys need to be made. The information thus gathered constitutes the basis of a number of reports issued each year to corporate members and to those who supply information. In 1943, the following reports were issued:

No. 328—Heat Balance in Sulphite Digesters
329—Heat Utilization in Sulphite Mills
330—Kraft Paper Drying Rates
331—Roll-Pulp Furnish to Beaters
332—Fuels and Their Application
333—Process Water Used in the Manufacture of Fine Paper
334—Moisture Content Test for Pulp
335—Deinking Old Papers
336—Relation of Sizing to Offset Printing on Uncoated Paper

Employment

Because of wartime demands and the Selective Service Act, there have been many jobs offered with but little opportunity to find individuals for them. Nevertheless, a large number of positions were filled and nearly all members of the Association were employed in one way or another during the year. Companies and members are urged to use this service of the Technical Association when the occasion demands.

Fall Convention

The fall meeting of the Association was held at the Palmer House, Chicago, Ill., September 21-24, 1943. More than four thousand registered either for the meeting or the exhibit. The meeting was designated as the Army and Navy Requirements Conference, and was featured by a magnificent ten thousand square foot exhibit built by the War Department and demonstrating the many uses of paper purchased through all the procurement agencies of the Army, Navy and Marine Corps. A large contingent of military and naval officers were on hand to explain the use requirements of the papers and containers used and required. The technical program was devoted largely to Army and Navy paper problems. The meeting was the greatest and most successful effort, during the war, of bringing together all of the important interests concerned with the use of paper in the war effort. A. E. Montgomery of the J. O. Ross Engineering Company was general chairman of the meeting. The papers presented have been published widely in trade magazines and thereby have greatly extended the influence of this tremendous meeting.

Research Promotion

Due to the war activities no research projects were directly financed by the Association during the year, although the Association promoted and obtained funds for a research project on dehydrated food packaging at the New York Agricultural Experimental Station at Geneva, N. Y. This project was closely related to

IT'S NOT TOO LATE TO SHORTEN THE WAR

Let's not kid ourselves. There's no reason to expect an early or an easy victory. Our boys have a lot of hard fighting to do before they come home. And American industry still has a big job of war production ahead before it is time to put post-war plans into operation.

Brown Company had undertaken a far reaching development program even before the war began. New and exciting possibilities were fast taking shape. Now, under the pressure of war, our research laboratories and mills have made tremendous advances in the utilization of wood cellulose fibres. Many of these wartime advances can be readily adapted to the Company's post-war civilian program. But right now our job is to back the attack of our armed forces. Brown Company's unique experience as pioneers in wood cellulose fibres is helping many manufacturers to produce better products that will aid in shortening the war. The Company's broad knowledge of specialized wood pulps and papers is available to other war manufacturers who are faced with raw material problems.

Forget the comforting assurances of "ultimate" victory. Let's get it over *quick*. Every extra day means that more American boys will be missing from the victory parade.

BROWN COMPANY

FOREMOST PRODUCERS PURIFIED CELLULOSE

SALES OFFICES: 500 FIFTH AVE., N.Y.C. – *MILLS:* BERLIN, N.H. & LA TUQUE, P.Q.

one of the major problems of the U. S. Quartermaster Corps.

Publications

This report attempts merely to point out the highlights of the Association's activities during the year. The complete report is better expressed in the principal publications of the Association. The TAPPI Year Book (367 pages) is in itself a detailed cumulative index of the Association's efforts over the years Its steady growth in size reflects the factual wealth steadily being built up by the organization. The papers presented, together with this discussion, appear conveniently in an 800-page cloth-bound volume, Technical Association Papers. Many of the papers presented appear also in the Paper Trade Journal, issued weekly to members, and other trade magazines.

The Bibliography of Papermaking and U. S. Patents, another clothbound volume (222 pages) was issued in the spring. This remarkable compilation prepared by Clarence J. West brought up to date the literature record of the industry, a record going back to 1900 and the only complete record ever kept by any industry of long standing.

TAPPI Standards and TAPPI Data Sheets are loose-leaf systems started and maintained by the association through the issuance of new material each year. The loose-leaf scheme was adopted to permit addition and necessary changes in their contents. The Standards have gained greatly in prestige during the war since they are referred to as the authoritative methods of testing paper and pulp in the specifications issued by the Army, Navy and many other Government agencies. They have also been reproduced in several major manuals on testing and are being adopted by other standardizing organizations such as the A. S. T. M. and The Packaging Institute.

A new publication, the TAPPI Bulletin, has just completed its first year of publication. It generally appears about twice a month as a four page printed leaflet (8½x11). During the War it is being devoted to subjects of direct bearing on the war effort. As time goes on, it will develop along lines dictated by reader interests.

Monographs

The Association has issued two volumes in its series of monographs, one on Industrial Water for Pulp, Paper, and Paperboard Manufacture, and the other on Saving Fourdrinier Wires. Lack of time has slowed up the preparation of other monographs, but volumes on coating, drying, and deinking are being developed.

Local Sections

No new sections have been formed during the year although a new organization called the Professional Paper Group of Chicago was organized in December, 1943. This organization was a natural product of the fall meeting of the national body held in September. Although the present officers are members of the Technical Association, there have been a large number of nonmembers in attendance. The attendance at the first meeting was about 140, including many converters and paper salesmen. A feature of some of the Section meetings during the current year has been a regional arrangement in which meetings are being held frequently in various parts of the territory normally served by the Section. This has resulted in a reduction of member travel. In the Empire State Section, in particular, this plan has been successful with meetings at Glens Falls, Syracuse and Watertown, and in the New England Section with meetings at Boston, Springfield, Holyoke, and Pittsfield. The Pacific Section has followed this plan for several years. It is possible that this success may lead to the formation of other sections serving more restricted areas than at present. The Sections existing today are the Pacific, Kalamazoo Valley, Lake States, Ohio, New England, Empire State and Delaware Valley. Another organization called the Maine-New Hampshire Group has held meetings during the past few years and should be ready to become a Section shortly after the war ends and transportation conditions are improved.

Wartime Activities

The Association has been contributing toward the war effort in many ways. Its national meetings have been organized largely to benefit the armed forces and the companies directly serving them. The TAPPI Bulletin has been largely devoted to circulating information to this end, and the central office has carried on a voluminous correspondence with all branches of the service, particularly in supplying a large number of procurement offices with the TAPPI Standards and other needed information. For the immediate benefit of the Office of the Quartermaster General, the Association has held special committee meetings to work out a suitable procedure for determining the water vapor permeability of papers to be used under extreme conditions in export shipments. This effort has included considerable research activities and was specifically requested by the Quartermaster General's Office.

Institute of Paper Chemistry

There has been a high degree of cooperation between the Association and The Institute of Paper Chemistry. Many papers have been contributed to the Association meetings by the Institute, and the Association has made financial contributions toward the building fund and the general operation of the Institute.

Division and Committees

Although war commitments have taken most of the time of members during the past year, the committee work of the Association has continued in many instances on a high plane. The large increase in papers offered for the fall and present annual meeting, as compared with those of the past two years, reflects a stabilization tendency in the industry and a willingness to share knowledge for the general good of the industry. A large number of testing standards were adopted through committee activity during the year. The following information deals primarily with personnel changes during the past year.

Engineering Division: W. G. MacNaughton, News Print Service Bureau, General Chairman. There were no personnel changes during the year. The present chairmen are: *Heat and Power Committee,* Roderick O'Donoghue, Consulting Engineer; *Drying, Heating and Ventilating Subcommittee,* A. E. Montgomery, J. O. Ross Engineering Corporation; *Production and Transmission of Power Subcommittee,* E. F. Burns, International Paper Company; *Heat Utilization in Chemical Processes Subcommittee,* W. T. Webster, Brunswick Pulp and Paper Company; *Materials of Construction Committee,* J. A. Lee, Chemical and Metallurgical Engineering; *Packing Materials Subcommittee,* J. W. Hemphill, Johns Manville Company; *Piping and Tubing Materials Subcommittee,*

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S. B. Jones, West Virgina Pulp and Paper Company; and the *Water Committee,* L. B. Miller, W. H. & L. D. Betz Company.

Industrial Division: H. H. Hanson, W. C. Hamilton & Sons, General Chairman. The only personnel change in this division was in the chairmanship of the *Industrial Engineering Committee* in whch W. M. Shoemaker of the Douglas T. J. Sterling Company replaced J. R. Atwater of the Office of Price Administration. The other chairmen are: *Fibrous Raw Materials Committee.* John Traquair,, the Mead Corporation; *Nonfibrous Raw Materials Committee,* E. N. Poor, W. C. Hamilton & Sons; and *Vocational Training Committee,* W. L. Cassiday, Hummel & Downing Division, Cornell Wood Products Company.

Converting and Consuming Division: Arno W. Nickerson, General Chairman. Werner Kaufmann of Kupfer Bros. Company replaced J. D. Davis of Dill & Collins Division of the Mead Corporation as chairman of the *Coating Committee.* The chairman of the *Containers Committee* is J. D. Malcolmson, Robert Gair Company, and of the *Graphic Arts Committee,* M. S. Kantrowitz of the Government Printing Office.

Research Development Division: D. W. McCready, University of Michigan, General Chairman. Dr. McCready replaced R. P. Whitney of the Massachusetts Institute of Technology as acting chairman of the *Engineering Research Committee;* R. H. Torrey of the Riegel Paper Corporation replaced Allen Abrams of the Marathon Paper Mills as chairman of the *Bacterial Control Methods Committee.* C. J. West, H. F. Lewis and C. W. Rivise continued as chairmen of the *Abstract and Bibliography, Fundamental Research* and the *Patents Committees,* respectively.

Pulp Manufacture Division: S. D. Wells, Institute of Paper Chemistry, General Chairman. R. M. Drummond of the International Paper Company succeeded Henry Perry of the J. P. Lewis Company as chairman of the *Mechanical Pulping Committee;* G. H. McGregor replaced D. C. Porter of the Kimberly-Clark Corporation as chairman of the *Acid Pulping Committee;* K. G. Chesley of the Crossett Lumber Company succeeded Paul Hodges of The Crossett Paper Mills as chairman of the *Alkali Pulping Committee* (Mr. Hodges died in November, 1943); D. T. Jackson of the Hammermill Paper Company continued as chairman of the *Pulp Purification Committee.*

Paper Manufacture Division: Pierre Drewsen, Hinde & Dauch Paper Company, General Chairman. A. E. Backmann of the Missisquoi Corporation, and C. M. Connor of the Valley Forge Laboratories, continued as chairman of the *Papermaking Committee* and *Preparation of Nonfibrous Materials Committee,* respectively.

Testing Division: Major J. d'A. Clark, Q.M.C., Subsistence Research Laboratory, General Chairman. L. V. Forman of The Institute of Paper Chemistry succeeded J. d'A. Clark as chairman of the *Pulp Testing Committee;* F. A. Burningham of the Brown Company replaced F. W. Bentzen of the Kimberly-Clark Corporation as chairman of the *Microscopy Committee.* B. W. Scribner, National Bureau of Standards, B. L. Browning, Institute of Paper Chemistry, Major B. E. Lauer, Chemical Warfare Service, W. F. Hathaway, Kalamazoo Vegetable Parchment Company, A. W. Nickerson, Consulting Engineer, and M. N. Davis, the Kimberly-Clark Corporation, continued as chairmen of the *Paper Testing Committee, Chemical Methods Committee, Fibrous Materials Testing Committee, Nonfibrous Materials Testing Committee,* the *Container Testing Committee* and the *Optical Properties Committee, respectively.* In the *Paper Testing Committee,* S. C. Fairbanks, Hamersley Paper Company, E. J. Albert, Thwing Instrument Company, and P. W. Codwise continued as chairmen of the *Absorptiveness to Paraffin Subcommittee, Testing Instruments Subcommittee* and the *Writing and Erasing Properties Subcommittee,* respectively. A new *Subcommittee on Water Penetration* was appointed with E. G. Mullen of the American Reenforced Paper Company as chairman. W. H. Graebner of the Marathon Paper Mills acted as chairman of a special *Water Vapor Permeability Testing Committee.* In the *Chemical Methods Committee,* S. I. Aronovsky of The Northern Regional Research Laboratory and T. L. Crossley of Defense Industries, Ltd., were chairmen respectively of the *Wood and Pulp Analysis Subcommittee* and the *Paper Analysis Subcommittee.*

SPECIAL COMMITTEES

R. C. Griffin, Arthur D. Little, Inc., J. L. Parsons, Hammermill Paper Company and George Carruthers, Interlake Tissue Mills continued as chairmen of the *Standards Committee, Research Appropriation Committee* and the *Joint Textbook Committee.*

Kraft Paper Association

Willard J. Dixon of the St. Regis Paper Company was re-elected to the presidency of the Kraft Paper Association, Inc. at its annual meeting held on Wednesday, February 16, 1943. George Stuhr of the Southern Kraft Division of International Paper Company was elected vice-president. The following were elected members of the executive committee for the year: W. H. Anders, Nashua River Paper Company; O. P. Carter, Gaylord Container Corporation; H. S. Daniels, Union Bag and Paper Corp.; J. R. Diggs, Mosinee Paper Mills Company; K. O. Elderkin, Crossett Paper Mills; R. L. Fitts, Southern Advance Bag & Paper Company; G. F. Henderson, Brown Company; R. A. McDonald, Crown Zellerbach Corporation; S. M. Phelan, Jr., West Virginia Pulp and Paper Company and C. W. Smith, Central Paper Company.

Cardboard Mfrs. Association

The Cardboard Manufacturers Association has decided to dissolve as a separate organization and ask for affiliation with Specialty Paper and Board Affiliates. Under the proposal of the Cardboard Association it will have two groups in the Specialty Paper and Board Affiliates, a Coated and Tag Board Group, headed by Malcolm B. Lowe, of the Lowe Paper Company, Ridgefield, N. J., and the Photomount group headed by Maurice Park of the Marvellum Company of Holyoke, Mass.

Soda Pulp Mfrs. Association

The Soda Pulp Manufacturers Association held a well attended meeting at the Waldorf-Astoria Hotel, February 15, but postponed the election of officers until a later date. The present officers of the association are: Chairman, Eustis Paine, president New York & Pennsylvania Company; vice-chairman, Amor Hollingsworth, president Penobscot Chemical Fibre Company; secretary-treasurer, Rufus I. Worrell, president Mead Sales Company.

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Projection Arrangement for Determination of Fiber Dimensions*

By John H. Graff[1] and John R. Feavel[2]

Abstract

The methods used for the determination of fiber dimensions are either too inaccurate or too time consuming, and they give little consideration to the relative width of the fibers and to the relative percentages of whole and broken fibers, ray cells, and fiber fragments.

The present paper describes a projection arrangement by means of which the length and width of the fibers can be determined and the necessary calculations made in a fraction of the time used for direct microscopic measurements. The relative percentages and frequency distribution of whole and broken fibers, ray cells, and fiber fragments can easily be calculated from these data.

The influence of the size of the mouth opening of the dropper has been investigated, as well as the relative percentage probable error for 100, 200, 400, 600, 800, and 1000 fiber measurements, both for the arithmetic and weighted average fiber length as well as for the average width.

The advantages of comparing different pulps, as regards their relative percentages by weight of short, medium long, and long fibers, by plotting these values on a triangular chart is also demonstrated.

Many different methods have been suggested and used for the determination of the fiber length of pulps. One method is to spread a relatively thin suspension of pulp fibers onto a microscope slide and estimate the length of the twisted and bent fibers under the microscope with an eyepiece micrometer scale. Another method is to place the slide or a glass dish with a thin suspension of fibers in a projection equipment and project the fibers at from 25 to 100 diameters onto a projection screen or paper; the length of the fibers may be measured directly by a mapmaker's curve or the fibers may be traced on a sheet of paper and the lengths determined by a map measure, a flexible ruler, or some similar method.

Both of these methods have serious drawbacks and the results obtained are more or less questionable. A much more accurate method is to prepare a suspension of a pulp with a density which will give about 25 fibers to the drop; using a dropper having an opening of 5 mm., 1 drop of this suspension is placed on the end of a number of slides. The slides are then dehydrated, 2 drops of iodine-iodide-calcium chloride stain are placed on the fibers and, after about 2 minutes, the excess is carefully removed. The saturated fibers are then straightened out with a dissecting needle under a dissecting microscope so that they are parallel with each other, covered with a cover glass, placed under the microscope, and the length and width measured with a filar micrometer, using a magnification of about 150 diameters *(1)*.

This method, although relatively accurate, takes considerable time, particularly in the measurements of long fibers and the measurement of fiber widths. However, the time could be considerably reduced if the slide with the straightened fibers was projected onto a graduated screen in such a way that all 25 fibers and the full length of the longest fiber could be observed at one time.

Such a projection arrangement should fulfill the following requirements: The angular aperture of the projection lens must be large enough to cover the whole field of the parallel fibers. As the projection distance is equal to the focal length of a lens times the magnification plus the focal length $[FM + F]$, the lens must have a focal length short enough to prevent undue length of projection at the magnification necessary for accurate determination of the fiber dimensions. The whole equipment should be compact and so arranged that it can be used without disturbing other activities in the room in which it is placed.

Equipment

Figure 1 shows a sketch of such an arrangement. It consists of a projection microscope from which the microscope tube has been removed; in place of an objective, the microscope is equipped with a F 12.5 mm. f 2.8 projection lens. The microscope and illuminant are placed in a box-like table equipped with a reflecting mirror. The inside of the box is painted a dull black. On the top of the table-box and above the reflecting mirror is a ground glass (finely ground) on which a series of lines are drawn at 7.5 mm. intervals, representing the actual space between the lines

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[2] Technical Assistant, The Institute of Paper Chemistry, Appleton, Wis.

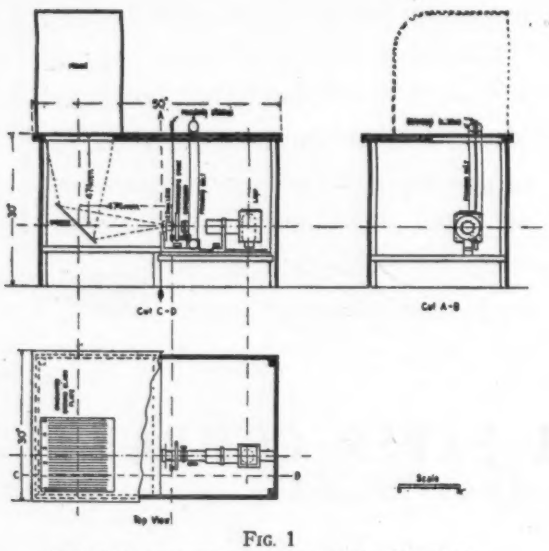

FIG. 1
Projection Arrangement for Fiber Length Determination

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of 0.1 mm. at 75 diameters magnification. Above the ground glass is a hood (the interior of which is painted dull black), which makes it possible to observe and read the dimensions of the projected fibers without disturbance from the light in the laboratory room.

At high humidity, fibers stained with iodine-iodide-calcium chloride solution fade during the operation of being straightened out on the slide. Therefore, it is much better to stain the fibers in a beaker with the Bright stain described by Graff *(2, 3)*, because this dyes both the unbleached and bleached fibers.

Staining of Fibers

Thoroughly disintegrated pulp (1.5 grams) is squeezed dry between the fingers, placed in 50 ml. of a 1:1 mixture of Bright stain solutions A and B *(4)* at room temperature, and stirred constantly for 1 minute. The pulp is then strained through a bolting cloth or nainsook, squeezed dry, and washed once with 500 ml. of distilled water in an Erlenmyer flask, strained, squeezed dry, put into 50 ml. of Bright stain solution C *(4)* at room temperature, and stirred constantly for 2 minutes, strained, squeezed dry, and again washed in 500 ml. distilled water. The pulp is again strained and diluted so that 1 drop (using a dropper with 5-mm. inside opening) will contain about 25 fibers.

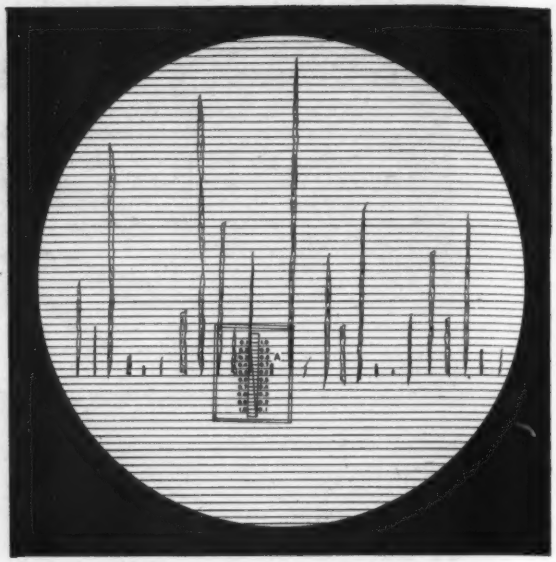

FIG. 3
Fibers Projected on the Ground Glass

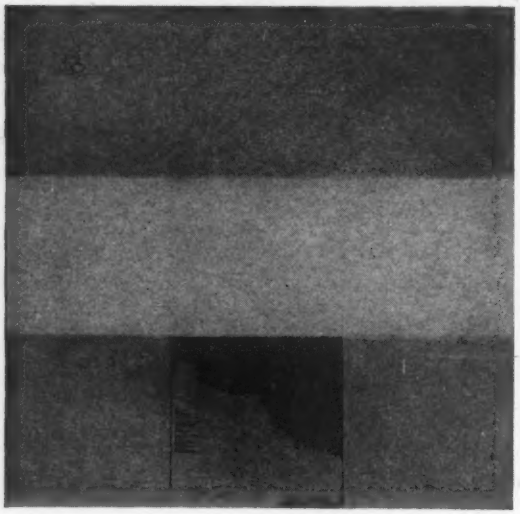

FIG. 2
Typical Slide before and after Fibers Are Straightened

This suspension is divided into four test tubes and 2 drops are taken from each tube, the tube being shaken well before each drop is taken. One drop is placed on the end of a standard microscope slide, making a total of eight slides. If the suspension is properly prepared, each drop should contain approximately 25 fibers.

These slides are then thoroughly dried at 50° C. in a drying chamber or on a hot plate. If the temperature is too high, the fibers will be cemented too strongly to the slide and may be broken during the straightening process.

TABLE I.[1]—OBSERVED READINGS

Softwood bleached sulphite

0.0-0.1		0.1-0.2		0.2-0.3		0.3-0.4		0.4-0.5		0.5-1.0		1.0-1.5		1.5-2.0		Dropper 4.4-mm. opening 2.0-2.5		2.5-3.0	
L	W	L	W	L	W	L	W	L	W	L	W	L	W	L	W	L	W	L	W
R.05	.02	R0.1	.01	F0.2	.01	R0.3	.02	B0.4	.04	B 0.6	.05	B 1.1	.04	W1.8	.04	W2.4	.04	W2.6	.03
R.05	.01	R0.1	.01	B0.2	.05	B0.3	.02	B0.4	.03	B 0.6	.04	W1.4	.04	W1.9	.04	W2.3	.05	B 2.5	.05
R.05	.01	R0.1	.02	F0.2	.01	B0.3	.04			B 0.8	.03	B 1.2	.03	B 1.9	.06	W2.2	.04	W2.8	.05
B.05	.03	R0.1	.01	B0.2	.03	B0.3	.07	0.8	.07	B 0.5	.05	B 1.0	.05	W1.7	.04	W2.2	.05	W2.5	.05
B.05	.02	R0.1	.01	R0.2	.02	R0.3	.03	2/		B 0.6	.02	B 1.4	.04	W1.9	.06	B 2.1	.06	B 2.7	.06
B.05	.03	F0.1	.01	R0.2	.02	R0.3	.01	0.45	.035	B 0.8	.05	B 1.0	.04	W1.5	.02	W2.0	.04	B 2.8	.05
R.05	.02	R0.1	.02	F0.2	.01					B 0.5	.05	W1.0	.05	B 1.6	.04	W2.3	.03	W2.6	.04
R.05	.02	R0.1	.01	F0.2	.02	1.8	.19			B 0.7	.04	W1.0	.03			W2.3	.04		
R.05	.02	R0.1	.01	R0.2	.02	6/				W0.6	.03	B 1.3	.04	12.3	.30			18.5	.33
R.05	.02	R0.1	.01	B0.2	.03	0.35	0.32			B 0.7	.03			7/		17.8	.35	7/	
F.05	.02	R0.1	.02	R0.2	.03					B 0.6	.03	10.4	.34	1.75	.043	8/		2.64	.047
R.05	.02	F0.1	.02	B0.2	.03					W0.5	.03	9/				2.23	.044		
R.05	.02	R0.1	.01	R0.2	.02					B 0.8	.04	1.16	.038						
		R0.1	.02	R0.2	.03					B 0.7	.03								
.65	.26	R0.1	.01							B 0.9	.06								
13/		F0.1	.01	2.8	.33					W0.8	.04								
0.05	.020	R0.1	.01	14/						B 0.7	.04								
		R0.1	.02	0.25	.024					B 0.7	.04								
		R0.1	.02							B 0.6	.03								
		R0.1	.02	R Ray cell															
		F0.1	.02	F Fiber fragment						1.27	.73								
		R0.1	.02	B Broken fiber						19/		3.0-3.5		3.5-4.0		4.0-4.5		4.5-5.0	
		R0.1	.01	W Whole fiber						0.67	.038	L	W	L	W	L	W	L	W
		R0.1	.01									W3.2	.05	W3.6	.06	W4.0	.06	W4.5	.05
		R0.1	.02									W3.2	.04	W3.7	.04	W4.2	.05		
		F0.1	.02									W3.1	.04						
		R0.1	.02									B 3.1	.04	7.3	.10	6.2	.11		
														2/		2/			
		2.7	.40									12.4	.17	3.65	.050	4.1	.055		
		27/										4/							
		0.15	.015									3.10	.043						

[1] In the columns of this table, the fiber length is reported only to the first significant figure, although the second decimal is considered in determining the average value.

After the fibers are dried, 1 drop of standard calcium chloride solution (1.36 specific gravity at 28° C.) is put on top of the fibers. After standing for about 2 minutes, the slide is carefully tilted toward the corner, the surplus chloride solution is examined for possible loose fibers (which must be teased back to the fiber mass), and the surplus chloride is removed with filter paper.

The slide is then clamped on a dissecting microscope and all the fibers are straightened out with a dissecting needle, and arranged side by side parallel to the length of the slide; a cover glass is placed over the fibers as shown in Fig. 2, with one edge close to one end of the fibers. Calcium chloride is irrigated (from a small pipet) under the cover glass from the edge nearest the fiber ends.

The slide is then put on the stage of the projection microscope and projected on the ground glass under the hood as illustrated in Fig. 3, which also shows a transparent micrometer scale (mounted between two lantern slide cover glasses) placed on the top of the ground glass (A, Fig. 3). This makes possible the determination of the length of each fiber to the nearest 0.1 mm. and also the estimation or direct measurement of the average width of each fiber to the nearest 0.01 mm.

At a magnification of 75 diameters ray cells, fiber fragments, broken fibers, and whole fibers can be distinguished and it is possible to enter the length and width of the projected fibers directly as shown in Table I; the letters to the left of each length measurement (R, F, B, and W) designate the fiber as a ray

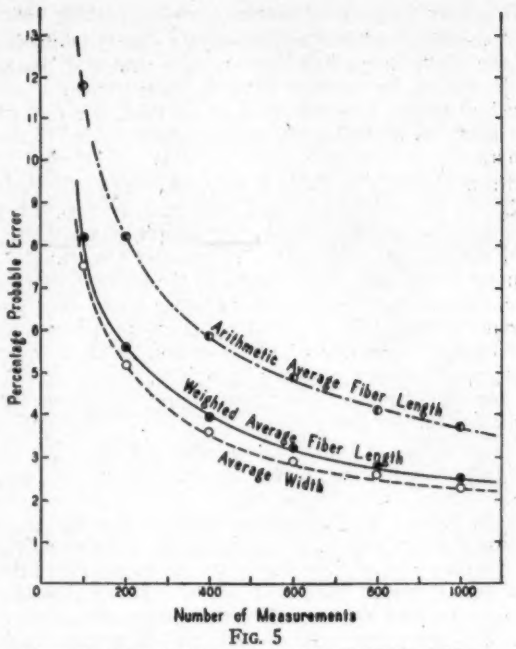

FIG. 5

Percentage Probable Error for Length and Width of Fibers

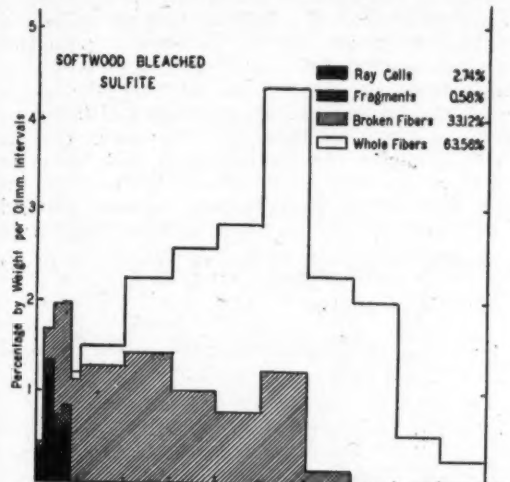

FIG. 4

Frequency Distribution of the Various Components of a Pulp

TABLE III.—LENGTH AND WIDTH BY PROJECTION

Softwood unbleached sulphite — Dropper 4.4-mm. opening

Set	Arithmetic Av. Fiber Length (a) mm.	Weighted Av. Fiber Length (b) mm.	Average Width mm.	Length (a)/ Width Ratio	Length (b)/ Width Ratio	Average Area sq. mm.
1	0.61	2.12	0.024	25.40	88.50	0.024
2	0.82	2.38	0.029	28.20	82.00	0.034
3	0.54	1.81	0.024	22.50	75.50	0.020
4	0.48	1.32	0.021	22.80	62.85	0.018
5	0.60	2.18	0.025	24.00	87.50	0.024
6	0.57	1.98	0.023	24.80	86.00	0.022
7	0.55	1.94	0.024	22.90	81.00	0.022
8	0.57	2.01	0.021	27.15	95.80	0.020
9	0.57	1.73	0.022	25.80	78.75	0.022
10	0.48	1.94	0.020	24.00	97.00	0.017
11	0.88	2.41	0.030	29.30	80.50	0.039
12	0.48	1.48	0.025	19.20	59.20	0.018
13	0.78	2.03	0.033	23.65	61.50	0.035
14	0.48	1.22	0.026	18.45	47.00	0.028
15	0.74	2.25	0.027	27.40	83.50	0.033
16	0.62	2.04	0.023	27.00	75.60	0.023
17	0.67	1.91	0.024	27.90	59.50	0.023
	10.44	32.75	0.421	420.45	1321.70	0.422
Average	0.62	1.93	0.025	24.80	77.30	0.025
S.D.	0.12	0.33	0.0033	2.94	12.40	0.0064
P.E.	0.08	0.23	0.0023	2.05	8.62	0.0045
S.D., %	19.00	17.00	13.00	12.00	16.00	26.00
P.E., %	13.00	12.00	9.00	8.00	11.00	18.00

TABLE II.—CALCULATED VALUES DERIVED FROM TABLE I

Softwood bleached sulphite — Dropper 4.4-mm. opening

mm.	Frequency	Percentage by Number (a)	Average Length (b) mm.	ab	Percentage of Length	Av. Width (c) mm.	ac	abc	Percentage of Area	ab²
0.0-0.1	13	10.75	0.05	0.54	0.57	0.020	0.215	0.0108	0.27	0.027
0.1-0.2	27	22.30	0.15	3.34	3.51	0.015	0.334	0.0501	1.25	0.503
0.2-0.3	14	11.60	0.25	2.90	3.02	0.024	0.278	0.0695	1.73	0.725
0.3-0.4	6	4.96	0.35	1.73	1.82	0.032	0.159	0.0556	1.38	0.605
0.4-0.5	2	1.65	0.45	0.75	0.79	0.035	0.058	0.0261	0.65	0.334
0.5-1.0	19	15.70	0.67	10.50	11.00	0.038	0.595	0.3980	9.90	7.050
1.0-1.5	9	7.45	1.16	8.62	9.05	0.038	0.283	0.3280	8.18	10.100
1.5-2.0	7	5.80	1.75	10.16	10.67	0.043	0.249	0.4350	10.82	17.750
2.0-2.5	8	6.60	2.23	14.70	15.45	0.044	0.291	0.6500	16.20	32.800
2.5-3.0	7	5.80	2.64	15.30	16.10	0.047	0.272	0.7175	17.85	40.500
3.0-3.5	4	3.30	3.10	10.21	10.72	0.043	0.142	0.4400	10.95	31.800
3.5-4.0	2	1.65	3.65	6.02	6.32	0.050	0.083	0.3020	7.50	22.000
4.0-4.5	2	1.65	4.10	6.75	7.10	0.055	0.091	0.3730	9.28	27.750
4.5-5.0	1	0.84	4.50	3.82	4.00	0.050	0.043	0.1635	4.07	17.200
	121			95.33			3.093	4.0191		209.144

Arithmetic average fiber length (a)..... 0.95 mm.
Weighted average fiber length (b) = $\Sigma ab^2/\Sigma ab$ 2.20 mm.
Average width ..... 0.031 mm.

Length (a)/width ratio 30.6
Length (b)/width ratio 71.0
Average area ..... 0.040 sq. mm.

cell, a fiber fragment, a broken fiber, or a whole fiber.

A minimum of 200 measurements should be made; if the eight original slides are not sufficient, extra slides must be made. If 200 measurements are reached before a whole slide is finished, the rest of the fibers on that slide are measured and added to the others.

From the data in Table I, the following can be calculated: the arithmetic and weighted average fiber lengths, the average width, the length/width ratios, and the average area of the fibers, and also the percentage frequency by number and the percentage frequencies of the length and the area; these data are given in Table II. For all practical purposes, the percentage frequency of the area can be considered as the percentage frequency by weight, assuming that, in one and the same pulp, the relative density is the same for all the fibers.

The relative amount and frequency distribution by weight of ray cells, fiber fragments, broken fibers, and whole fibers in a pulp can be calculated from the data in Table I, and plotted as shown in Fig. 4.

For the purpose of determining the relative effect of the diameter of the opening of the dropper and the number of measurements to attain a reasonably low percentage probable error for the different calculated factors, seventeen sets of 100 measurements each were made of softwood unbleached sulphite, using a dropper with a 4.4-mm. opening; 22 sets of 100 measurements each were made of the same pulp, using a dropper with a 5.9-mm. opening; and ten sets of 100 measurements each were made of softwood bleached sulphite, using a 4.4-mm. and a 5.9-mm. dropper, respectively.

Table III shows the individual results of seventeen sets of measurements for softwood unbleached sulphite using a 4.4-mm dropper, together with the average of each factor for the total number of measurements and the standard deviation (S.D.) and the probable error (P.E.) for each individual set.

Table IV shows the average for each factor for the four different experiments, together with the standard deviation and probable errors for a total of 100 measurements in each case, and Table V shows the

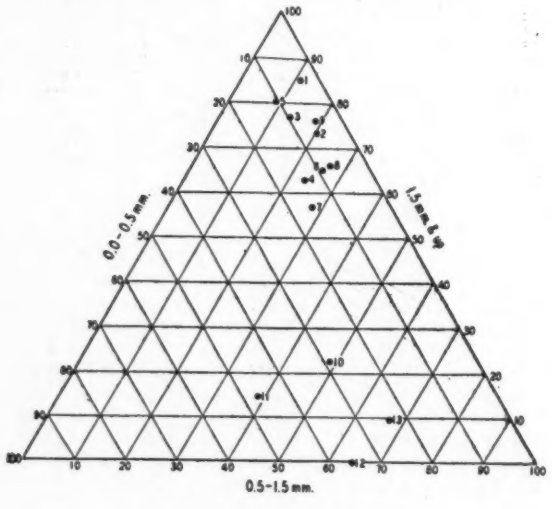

Fig. 6

Frequency Distribution by Weight of Short, Medium and Long Fibers

TABLE IV.—RESULTS OF LENGTH AND WIDTH MEASUREMENTS BY PROJECTION

	Arithmetic Av. Fiber Length (a) mm.	Weighted Av. Fiber Length (b) mm.	Average Width mm.	Length (a)/ Width Ratio	Length (b)/ Width Ratio	Average Area sq. mm.
Softwood unbleached sulphite. Dropper 4.4-mm. opening. 17 sets of 100 measurements						
Averages	0.62	1.93	0.025	24.80	77.30	0.025
S.D.	0.12	0.33	0.0033	2.94	12.40	0.0064
P.E.	0.08	0.23	0.0023	2.05	8.62	0.0045
S.D., %	19.00	17.00	13.00	12.00	16.00	26.00
P.E., %	13.00	12.00	9.00	8.00	11.00	18.00
Softwood unbleached sulphite. Dropper 5.9-mm. opening. 22 sets of 100 measurements						
Averages	0.70	2.00	0.027	26.00	74.00	0.028
S.D.	0.12	0.28	0.003	4.27	15.80	0.006
P.E.	0.08	0.19	0.002	2.96	11.20	0.004
S.D., %	17.00	14.00	11.00	16.00	21.00	21.00
P.E., %	11.00	10.00	7.00	11.00	15.00	14.00
Softwood bleached sulphite. Dropper 4.4-mm. opening. 10 sets of 100 measurements						
Averages	0.76	2.12	0.026	29.20	81.60	0.029
S.D.	0.11	0.15	0.0024	2.26	7.33	0.0051
P.E.	0.08	0.11	0.0017	1.53	5.22	0.0036
S.D., %	14.00	7.00	9.00	8.00	9.00	18.00
P.E., %	11.00	5.00	7.00	5.00	6.00	12.00
Softwood bleached sulphite. Dropper 5.9-mm. opening. 10 sets of 100 measurements						
Averages	0.66	1.98	0.023	28.70	86.00	0.023
S.D.	0.12	0.16	0.0022	3.74	7.90	0.0043
P.E.	0.08	0.11	0.0015	2.65	5.60	0.0031
S.D., %	18.00	8.00	10.00	13.00	9.00	19.00
P.E., %	12.00	6.00	7.00	9.00	7.00	13.00

percentage probable errors for 100, 200, 400, 600, 800, and 1000 measurements for each of the four experiments, together with the average percentage probable error. These results are plotted in Fig. 5.

The data in Table IV indicate that the arithmetic average fiber length for the unbleached pulp was 0.62 mm. using a 4.4-mm. dropper and 0.70 mm. using a dropper with a 5.9-mm. opening; the results for the bleached sulphite show a length of 0.76 mm. for the 4.4-mm. dropper and 0.66 mm. for the 5.9-mm. dropper. As the calculated probable error in all four instances was 0.08 mm., it must be assumed that any dropper opening between 4.5 and 6.0 mm. will give comparative results. The curves

TABLE V.—PERCENTAGE PROBABLE ERRORS FROM 100 TO 1000 MEASUREMENTS

Number of Measurements	Arithmetic Av. Fiber Length (a) mm.	Weighted Av. Fiber Length (b) mm.	Average Width mm.	Length (a)/ Width Ratio	Length (b)/ Width Ratio	Average Area sq. mm.
Unbleached sulphite. Dropper 4.4-mm. opening						
100	13.00	12.00	9.00	8.00	11.00	18.00
200	9.20	8.10	6.20	5.60	7.60	12.20
400	6.50	5.80	4.40	4.00	5.40	8.60
600	5.30	4.70	3.60	3.20	4.40	7.00
800	4.60	4.10	3.20	2.80	3.80	6.10
1000	4.10	3.60	2.80	2.50	3.40	5.50
Unbleached sulphite. Dropper 5.9-mm. opening						
100	11.00	10.00	7.00	11.00	15.00	14.00
200	8.10	6.60	5.30	7.80	10.00	10.00
400	5.80	4.70	3.70	5.50	7.20	7.20
600	4.70	3.80	3.00	4.50	5.90	5.90
800	4.10	3.30	2.60	3.90	5.10	5.10
1000	3.70	3.00	2.40	3.50	4.60	4.60
Bleached sulphite. Dropper 4.4-mm. opening						
100	11.00	5.00	7.00	5.00	6.00	12.00
200	6.90	3.40	4.40	3.70	4.30	8.40
400	4.80	2.40	3.10	2.60	3.00	5.90
600	4.00	1.90	2.50	2.10	2.50	4.80
800	3.40	1.70	2.20	1.80	2.10	4.20
1000	3.10	1.50	2.00	1.60	1.90	3.70
Bleached sulphite. Dropper 5.9-mm. opening						
100	12.00	6.00	7.00	9.00	7.00	13.00
200	8.70	3.80	4.50	6.20	4.40	8.90
400	6.10	2.70	3.20	4.40	3.10	6.30
600	5.00	2.20	2.60	3.60	2.50	5.10
800	4.30	1.90	2.30	3.10	2.20	4.40
1000	3.90	1.70	2.00	2.80	2.00	4.00
Averages						
100	11.80	8.20	7.50	8.20	9.80	14.20
200	8.20	5.50	5.10	5.80	6.60	9.90
400	5.80	3.90	3.60	4.10	4.70	7.00
600	4.80	3.20	2.90	3.40	3.80	5.70
800	4.10	2.80	2.60	2.90	3.30	5.00
1000	3.70	2.50	2.30	2.60	3.00	4.50

TABLE VI.—FIBER DIMENSIONS OF PULPS

No.	Pulps	Arithmetic Av. Length, mm.	Weighted Av. Length, mm.	Percentages by Weight from 0.0-0.5 mm.	0.5-1.5 mm.	1.5- mm.
1.	Unbleached southern pine kraft	1.38	3.26	3.46	10.74	85.80
2.	Unbleached eastern jack pine kraft	0.63	2.18	6.57	20.38	83.05
3.	Unbleached western hemlock kraft	0.80	2.28	9.53	13.11	77.36
4.	Softwood western bleached sulphite	0.49	1.96	13.54	23.18	63.28
5.	Softwood unbleached Mitscherlich sulphite	0.51	2.38	10.07	9.40	80.53
6.	Unbleached balsam sulphite	0.64	1.65	8.87	25.45	65.68
7.	Softwood eastern unbleached sulphite	0.58	1.60	14.47	27.56	57.97
8.	Softwood eastern bleached sulphite	0.85	2.30	6.96	26.51	66.57
9.	Softwood paper-grade Alpha	0.98	2.29	4.81	18.71	76.48
10.	Rag filter paper	0.58	0.99	28.78	48.45	22.77
11.	Hardwood bleached sulphite	0.18	0.65	46.73	38.54	14.73
12.	Hardwood bleached soda	0.33	0.69	35.41	64.59	....
13.	Hardwood paper-grade Alpha	0.35	0.76	23.09	69.70	7.21

in Fig. 5 illustrate two significant facts: (1) at least 200 measurements must be made to obtain results with a reasonable low percentage probable error and (2) the percentage probable errors for the weighted average fiber length and for the average width of the fibers are considerably less than the percentage probable error for the arithmetic average fiber length. This is important, because the weighted average fiber length and the percentage frequency distribution by weight are the significant values in fiber length data and because, as shown in previous work *(5)*, the weighted average fiber length is indirectly proportional to the number of fibers in a gram of pulp.

Klemm *(6)* and Schultze *(7)* suggested the advisability of reporting fiber length dimensions as the percentage by number of short, medium, and long fibers; and Bixler *(8)* and Graff and Miller *(1)* demonstrated that fiber length dimensions should be reported as the percentage by number and by weight of short, medium, and long fibers.

From tabulations like that shown in Table II, it is relatively simple to determine the percentages of short, medium, and long fibers by number or by weight. Determination by weight should eliminate, to a certain extent, the need for screen fractionation, because the percentages of the relatively short, the very long, and the intermediate lengths can be determined with the assurance of no overlapping of the divisions; however, one must decide the limits of these divisions; in most cases, they will depend upon the pulps to be compared or the purpose of the investigation.

Table VI contains data on certain pulps studied in earlier work *(5)*, which include the arithmetic and weighted average fiber lengths together with the percentages by weight of fibers from 0.0 to 0.5 mm., 0.5 to 1.5 mm., and 1.5 mm. and up. Figure 6 is a plot of these percentages on a triangular chart, and gives a clear comparison of the percentages for the selected divisions of short, medium, and long fibers.

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An Engineer's Conception of Post-War Planning*

By Milton Jacobs[1]

Abstract

Good planning requires the combined and coordinated efforts of all persons contributing to a successful operating organization. The most important service an engineer can render today is to correlate pertinent data and information into an overall picture from which logical and economical plans can be formulated. The various aspects are discussed.

It is evident that a concerted action on the part of industry is necessary to combat a serious problem which will confront the country. The time and intensity with which this problem will strike the social situation, and the extent to which industry must act as the shock absorber to prevent serious and possibly disastrous results, depends upon the conduct and progress of the war.

Because of the tremendous scope of the subject of "Post-War Planning" it will be necessary to confine this paper to the pulp and paper industry and more specifically to pulp and paper as a basic industry. The expanded uses to which paper may be put as a material for new and improved products will not be discussed but rather the actual production of pulp and paper as such. Only the engineer's viewpoint will be considered which must, of course, be combined with a management's overall viewpoint to produce results within the structure of a sound economic policy.

Stripped of all social and humanitarian aspects "Post-War Planning," represents an accumulation of planning which has been deferred because of war conditions and a preceding period of depressed business conditions. Restrictions the past few years have prevented ordinary replacements and improvements. With an accumulation of these deferred replacements and improvements the necessity of planning has been energized and brought into focus. The manufacturers have also become aware of the amount of material previously put back into the plants from year to year and the more effective results which could have been obtained had these expenditures been made with a preconceived plan covering the overall production requirements. The problem of improve-

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ment and expansion must now be faced squarely. Management must decide if it is to be satisfied with merely fixing it before it shuts the plants down or whether it shall actually improve operating conditions through planned repairs, replacements, and capital expenditures.

Because of an accumulation of deferred work, the phrase "Post-War Planning" should not be allowed to become a hysteria. Pressure is being brought to bear by federal, state, and local organizations as well as others who would like to obtain orders to be filled in the future as a hedge against a declining rate of production. The humanitarian side is being stressed. The problem of placing men in industry as they return from the armed services and from plants now producing war materials is to be confronted. However the reaction can become more serious than the immediate problem if the time, effort, and money expended on post-war planning is not applied to an economical program. The sincerity of the groups pressing industry to make commitments either real or implied, is not questioned but they fail to caution that those commitments should not be made until such commitments are correlated against an overall program, and will produce desired results at a cost commensurate with the resulting operating conditions. If a program is all thought out and set down on paper with an assurance that the results are economical for specific conditions, then firm commitments are entirely in order.

Evaluation of Assets and Liabilities

Any planned work against a program projected into the future must take into consideration all of the factors pertinent to the problem. The first step is to find out what is on hand, not what is thought to be on hand. This requires a comprehensive appraisement of raw material supplies, power and steam supply, water supply, material handling and transportation facilities, labor markets and conditions, drainage and waste disposal as well as the existing productive equipment and structures and their correlated arrangement including the terrain and the property in general with service connections. This appraisement should carefully consider and evaluate the expected useful life of the major productive machines and structures housing them.

The transition from the past to the future must pass through the present. The best that can be done is to make a skillful application of the present best knowledge to the particular conditions and requirements of the specific problems. New products, processes, equipment, and procedures will be developed. Paper has gone a long way in providing a substitute material in the war effort but the acceptance of these substitutes under the conditions as they exist after the war is not apparent to the engineer. Other industries can be expected to put forth great effort to regain any lost ground and the public will demand that product which is best suited to the needs, has eye appeal, and a utility in excess of the bare necessity.

Inadequate and obsolete machinery must be replaced. A large part of capital investment is made up of moderately good major items of equipment. This equipment cannot all be junked. Some can be improved. The ability to improve existing machines to bring them up to economical producing units will govern to a great extent the development of new machinery. The percentage of present operating plants that can justify or find the money required to replace all or a major portion of their equipment is questionable. Too much stress is being placed upon the possibilities of developing new processes and machines while fundamental basic changes and improvements are left undone.

The manufacturers will be kept informed as to the improvements, fully developed or contemplated, in equipment and processing through sales representatives and literature circulated by sales organizations. These are designed to arouse the desire to learn more about what is new. They serve a very useful purpose to industry and make up one of the impelling forces towards progress and improvements for the benefit of all. Through organizations such as the Technical Association of the Pulp and Paper Industry, the Superintendents Association, and through industrial magazines much valuable data concerning what is new and what is under consideration can be obtained. However careful and judicious analysis of the total problem is required to be able to make a skillful application of the proper equipment and structures to meet particular needs. Help is also available when needed from many specialized service organizations.

Geographic Considerations

A most unusual situation will exist for a manufacturer if geographical location and physical conditions do not govern to a great extent the productive rate and the products that can be expected to be sold at a profit in open competition in the logical markets. These limitations must be recognized as they will narrow any effort in the pulp and paper field to within certain spheres of endeavor. Competition will be keen and it imposes too great a burden upon organization to produce and sell at a profit when nature has stacked the cards. A change of products, productive rates, and what is able to be done in the matter of any planned program may be more logically governed by physical conditions than by radical developments in operating equipment and processes.

An assured supply of raw materials of adequate characteristics and quality is too fundamental to mention except in passing. If these supplies are available plus such supplies as can be anticipated as being desirable to meet with future growth and development of new products now in mind, the producer is in a favorable position. These supplies must be such as to balance against productive equipment. Productive capacity must not get out of step with these supplies.

Good planning requires the combined and coordinated efforts of all departments of an organization. It must include consideration from heads of the personnel, sales, research, engineering, production, purchasing and financial departments and all others contributing to a successful operating organization. The desires and opinions of various department heads may at times be divergent. A solution to these divergencies of opinions and desires can be solved by setting the problem and various solutions down on paper both analytically and graphically. From this the most advantageous procedure to be followed to obtain overall economical operating conditions will become evident. The most important service an engineer can render industry at this time is to correlate pertinent data and the opinions of various department heads as it applies to all of the phases of the production problem involved and put this on paper in an understandable and comprehensive manner showing the physical limitations governing any solution.

Pulp and Paper Controls Meeting

At the open meeting on pulp and paper controls, at which E. W. Tinker presided, James L. Madden, assistant director of the Paper Division, WPB spoke on "Pulpwood"; David Graham, director, Office of Pulp Allocation, WPB, spoke on "Pulp Allocation," and Rex W. Hovey, Director of the Paper Division, WPB, spoke on "Paper." Written questions relating to policy, programs and WPB regulations were answered by the respective speakers.

Address of James L. Madden

Advance buying, Mr. Madden declared, showed that the former over-all estimates of paper were not necessary. After Pearl Harbor the bubble burst. Production of many types of civilian goods were discontinued and the Nation realized that it did not need so much paper, that from 8 to 9 million tons should suffice. This confusion resulted in increased paper inventories and talk that many mills would be forced to suspend operations.

In the meantime, however, manpower was being drained from the forests and other industries and the cutting of pulpwood declined. Through the efforts of the American Paper and Pulp Association to explain the increasing critical wood supply situation, a new kind of thinking was brought about in the WPB. Owing to the time-lag factor, from the cutting of pulpwood to receipts of wood at the mills, future supply of pulpwood cannot be reasonably determined. One guess is that the supply for 1944 will be a little over 16,000,000 cords, against 18,000,000 cords for 1943, although more wood will be needed in 1944. The wood deficit for the current year apparently will be about 3,000,000 cords.

The current pulpwood supply situation is complicated by heavy and increasing military requirements, for more V-boxes and many other essential types of paper. Defense plants are having difficulty in obtaining the wrapping paper they require. Pulp inventories have become depleted in the Northeast and Northwestern sections. Manpower shortages, transportation difficulties and prices are involved. The WPB is working out a grading list, and is taking steps to increase the staffs of its rural divisions. This will expand its facilities for working closely with the mills to increase their efficiency in woods' operation.

The truck supply situation is especially critical in the South. Relief has been provided by easing up the requirements to purchase new trucks, and by the addition of second-hand trucks. If this had not been done many mills would have been forced to close. The supply of tires is tight and insufficient rolling stock is hampering pulpwood delivery to Southern mills. Equipment, however, such as power saws, is available.

The WPB is cooperating with the OPA to establish an equitable solution of the price problem.

From the questions answered by Mr. Madden, it appears that allocations of pulpwood are not expected to be extended beyond the allocations now in effect on Canadian wood and on the West Coast, unless the war situation may require fuller allocation control. The wood supply of individual mills is a problem now being carefully considered for further inquiry and a future report.

To the question of pulpwood supply in the last quarter of 1944 and in 1945, the answer was that it was impossible to predict what might result from the present manpower shortage, the weather and the serious truck supply outlook. Current receipts of pulpwood, particularly in the South were off 15% in January from December of last year.

An estimate at this date indicates that wood prospects for 1944 are about equal to receipts for 1943, although more pulpwod is needed. The WPB in analyzing mill receipts takes all important factors into consideration. It is guided by the best reports from its field representatives and asks that mills supply accurate estimates of their wood receipts at quarterly periods.

Address of David Graham

David Graham, Chief, Pulp Allocation Office, Forest Products Bureau, after reviewing the background of pulp allocation said the period of critical shortage in pulp and waste paper began in the early summer months of 1943 and has become intensified during the past few months. The policies which have become crystallized during the allocation for the first quarter of 1944 were gradually formulated as a result of the experience gained during the past two years.

The Wood Pulp Allocation Industry Advisory Committee has been of great help ever since it was set up in April 1942. It consists of a group of men who have given generously of their time in helping us with a very complex problem. This committee, composed of 19 members, is representative of the industry in respect to all the various types of mills and types of products. It includes representatives of large, medium, and small mills from all sections of the paper and paperboard industry. It includes representatives from integrated, semi-integrated, non-integrated mills and market pulp mills. It includes also consumers of wod pulp for non-paper products.

At the December meeting of the Allocation Committee, the problem of distributing the burden of substantial reductions in the use of wood pulp in variout segments between the integrated mills and the non-integrated mills was the most important and difficult question created by the Program Determination. Mr. Boeschenstein, director of the Forest Products Bureau, emphasized that, despite the fact that it would present opertaing difficulties for many mills, the allocations must be made to the various segments in line with the determination of the Requirements Committee because that determination reflected the essential requirements for paper. However, he indicated that insofar as it could be done, consistent with the Program Determination "allocations should afford as many mills as possible an opportunity to continue to operate." He stated that the War Production Board proposed, when necessary, to withhold permission from the integrated mills to consume their entire production of wood pulp to the extent that such withholding does not destroy the incentive for production, thereby contributing to further shrinkage in total supply in future months to the detriment of everyone.

While it is fair to state that no general overall statement of fixed policy applicable arbitrarily to each

segment was followed, there are certain general policies which are common to many of the allocations. The extent to which each of these policies may have governed allocations in a particular segment is a matter of degree depending in large part upon the peculiar character of and problems involved in each segment. However, principles of such general application as to be worthy of special note here are outlined below. These general principles are:

1. Paper and paperboard mills producing no wood pulp or using no waste paper or other supplementary fibrous material should be allocated sufficient market wood pulp for the production of essential papers which cannot be produced in other mills. This is highly desirable because some of these mills are producing types of paper and paperboard which cannot otherwise be produced in sufficient quantities to meet war and essential civilian needs and such pulp allocation is necessary to insure satisfaction of these needs.

2. Partially integrated mills should be allocated sufficient market wood pulp to enable them to utilize all the pulp which they produce with the exceptions of such quantities of their own pulp as may be withheld by the War Production Board for diversion to non-integrated mills. The reasons for allocating wood pulp to partially integrated mills are:

a. Such mills to not produce enough pulp to maintain practical minimum operating rates on their paper and paperboard machines.

b. The manufacture of most types of paper and paperboard require the blending of several different types of pulp only one of which, is, as a rule, produced in a partially integrated mill.

c. Hence, the allocation of additional pulp is a means of maximizing production of pulp and paper, avoiding loss of operating capacity, and securing the desired types of product in the tonnages required.

3. Paper and paperboard mills with waste paper or rag conversion plants should be allocated sufficient market wood pulp to enable them to utilize the maximum capacity of their waste paper or rag processing equipment. In order to meet the war and essential civilian requirements of paper and paperboard with the reduced supply of wood pulp now available, it is necessary to ensure the maximum production and use of waste paper, rags, and all other supplementary fibres suitable for paper making.

4. Pulp should be diverted from wholly integrated and semi-integrated mills to non-integrated mills in sufficient quantities to enable the non-integrated mills to continue in operation provided that such diversions do not jeopardize the operations of the integrated mills or their production of the necessary quantities of certain types of paper and paperboard required to meet war and essential civilian needs.

While these basic policies were followed, it was found that it was necessary to devise a specific procedure for the allocation of pulp within each segment. The reasons for this decision will be clear when it is remembered that in some segments practically all the mills are integrated; while in others they are almost entirely non-integrated; that in some segments basic weights can be lowered substantially, in others very little; in some segments the use of filler and waste can be increased to a much greater extent than in other segments; and finally the cut in authorized use of pulp as determined by the Requirements Committee was greater in some segments than in others.

So that you can realize the full extent of the allocation problem, Mr. Boeschenstein authorized the release of the detailed statement of February 5 showing how much pulp was allocated to each segment of the industry and outlining the policies and procedures followed in making allocations in each segment. We hoped that the mills will supplement these allocations in every possible way with the use of other fibers so that the minimum paper requirements may be met. Only with the full cooperation of the mills in the use of supplementary fibers will the War Production Board be able to keep all mills in operation. The program of paper production must be met.

For the first quarter of 1944 the domestic mills have estimated that they will produce 2,568,000 tons of wood pulp. Based on our past experience however, we know that this figure is too optimistic.

The Canadian Government has undertaken to supply the United States with 1,105,000 tons of wood pulp during 1944 or approximately 92,000 tons per month. Unfortunately, for reasons which are well known to you shipments from Canada have not been made during January and the month of February to date at this rate. The War Production Board is confident however, that the Canadian government will make good its undertaking to supply the United States with the agreed 1,105,000 tons of wood pulp during 1944.

For the first quarter of 1944 the War Production Board has authorized the use of 2,779,000 tons of wood pulp for the production of paper, paperboard, non-paper products and for export.

It is not possible at this time to predict the extent to which this level of wood pulp consumption will be maintained at the expense of further reductions in our inventories of pulpwood and wood pulp. Nor is it possible to tell you now how much wood pulp will be authorized for consumption and export during the second quarter of 1944. The program determination for the second quarter will, however, be made after careful analysis of the most recent date covering production, imports, consumption, exports and inventories.

Now, gentlemen, I would like to leave one final thought with you. For many months you urged the War Production Board to recognize the essentiality of your industry before the declining raw material supply threatened the output of essential papers.

As of this moment, the essentiality of the industry has been recognized by the War Production Board at its highest policy making level. WPB is committed to a policy of increasing the supply of pulpwood, wood pulp, and waste paper by all means at its disposal.

But, gentlemen, this recognition of essentiality, while it brings practical assistance to your problems, also it imposes responsibilities. As the leaders of this industry, you are responsible for bending all your efforts to assist the War Production Board in the enormous task of getting out more raw material.

Address of Rex W. Hovey

There seems to be a growing feeling, Mr. Hovey said, that the war is about over and there will be an easing up of the wood situation. The WPB has no thought about the end of the war. Expenditures will be increased and the burden on industries will be harder. The manpower problem has been somewhat lessened by more efficient production, but in-

dustry must plan to carry its burden to supply the amount of paper required for essential military and civilian uses. The Army and the Navy care nothing about paper other than the quantity they need. They will continue to get all they want and only the civilian supply must be cut to provide it.

Mr. Hovey repeated what Donald M. Nelson and other speakers at the convention said in emphasizing the urgent need of mills to supply Army and Navy requirements on their bids. The industry has not cooperated sufficiently in fulfilling bids, Mr. Hovey stated. Procurement agencies are not now satisfied and unless orders are voluntarily filled, compliance to supply essential paper for the Armed Forces must follow. The WPB needs more of the best men from the paper and pulp industry to help solve the problems of their industry.

In reply to a question as to whether there existed an actual shortage of paper, Mr. Hovey said that, if all kinds of paper in demand are essential, then there is a paper shortage. He said that the waste paper collection drives in progress collected 578,000 tons in January, which is an improvement over past months.

Mr. Hovey emphasized the need for the industry to make the fullest possible utilization of pulp at its disposal. The WPB is not rationing the production of any mill having adequate wood supply, but mills must supply the grades of paper the government must have. The Over-All Committee sees to it that essential military requirements are first met, then follows the most essential civilian requirements.

Barto Paper Mill Sold

The Gibbs-Brower Company, Inc., well known paper and pulp mill brokers of 21 East 40th street, New York, recently sold for B. S. Livingston of Livingston & Southard, Inc., of New York, the 40-inch cylinder paper machine paper mill at Barto, Berks County, Pa. formerly known as the West Branch Paper Mill and run for many years by Isaac C. Yoder.

Mr. Yoder owns a farm across the stream from the paper mill and when he sold the mill a number of years ago, he took up farming and is still on his farm.

The new owner of this mill is William E. Scheid, formerly of Plymouth, N. C. Mr. Scheid has had a great deal of experience in the manufacture of paper and since the war has been doing some work for the United States Government in connection with paper production problems, etc. Mr. Scheid has put the mill in A-1 shape and will take charge of its operation himself. He is the sole owner and proprietor. Mr. Scheid will continue to operate the mill under the name of the West Branch Paper Mill.

Goes with Hollingsworth & Whitney

The Hollingsworth & Whitney Company announces that effective March 1 T. K. Davis will be associated with it. He will make his headquarters in the company's New York sales office.

Mr. Davis' connection with the paper industry dates from 1914. He was sales manager of Nashua River Paper Company from 1930 to 1942. During the past year he has been with Price & Pierce, Ltd. in charge of their Paper Department. Mr. Davis has had an exceptionally broad background in the marketing of many types of paper.

Eli de Vries Speaks on Exports

Eli de Vries, president of Parsons & Whittemore, well known paper exporters; and president of the United States Paper Exporters Council, entertained about 75 members of the paper industry at a Javanese Rysttafel, Monday evening of this week at the Netherland Club, New York.

Dr. N. A. C. Slotemaker de Bruine, head of the Netherlands Information Bureau, was a guest of honor at the dinner and spoke about the activities of the underground in the Netherlands.

In introducing his subject Mr. de Vries said: "When I was 18 years old, my parents wanted to find out what kind of a man I was going to be, and in order to find out some friends advised them they should put on the table a Bible, a bottle of gin, and a bank note of $20.00. They told my parents that if I would choose the Bible, I would become a pastor, if I would take the bank note, I would become a banker, and if I would take the bottle of gin, that I would become a drunkard. When I came home that evening and saw the beautiful display on the table, I took the Bible under my left arm, close to my heart, the bottle of gin under my right arm, and the $20.00 in my pocket.

" 'Oh my' . . . my parents said, 'he is going to be a politician' . . . but they were all wrong, for I did not become a banker, I did not become a pastor, I did not become a drunkard and I did not become a politician . . . I became a paper exporter. . . .

"My talk tonight is based not upon utopian visions, but upon the cold hard facts of reality . . . facts of interest to us in the paper field.

Someone has said that the 20th century will be the American century. I don't know, but one thing I do not doubt . . . and that is that American manufacturers will become and remain pre-eminent in the world markets.

"I firmly believe that American paper sales can be stimulated to an unprecedented height and what's more . . . that we can stabilize it at a high level, and this we can do through the medium of a sound export business."

Pointing out that the world's output of paper had increased from 10,000,000 tons to 35,000,000 tons in twenty-five years, Mr. de Vries said that about 5 per cent of the world's population consumed 50 per cent of the total paper production.

Immediately after the war, he said, there will be a universal demand for literacy in all nations. For example, he said, the New York Herald Tribune on Jan. 23 stated that India's trade balance has been bettered by approximately $4,000,000,000. India, he continued, is only using a "couple of ounces of paper per capita today."

The factors conducive to American dominance of the export paper market are all present, he said, as foreign markets are growing and competition will be limited. Companies, he added, which had suddenly to turn from Scandinavia to the United States as the main source of paper supplies are "keenly interested" in this nation's attitude concerning export after the war.

Mr. de Vries expressed the hope that American mills would take an interest in continuing the export trade created by the war, adding that "we should definitely welcome such a development as we have found, generally speaking, American papers to be perfectly satisfactory for this market."

Transportation Is Serious Problem

F. E. Hufford, transportation consultant WPB, addressed the Traffic Committee of the American Paper and Pulp Association February 15 at the Waldorf-Astoria Hotel. Mr. Hufford spoke in part as follows:—

We are alarmed at the transportation situation. The months ahead will be an extremely critical period for transportation. The railroads are confronted with growing manpower shortages, a tightening car supply situation, the operating difficulties that accompany severe winter weather, and the other stresses and strains produced by war conditions. The freight load is increasing and it is possible that an added volume of highway traffic will have to be diverted to the rails.

A survey recently completed by the Paper Division, War Production Board, shows the present serious operating condition of the motor trucks in the pulpwood industry. Of the 12,000 trucks currently engaged in pulpwood production, 23% are in good condition, 30% are in fair condition, 33% are in poor condition, and 14% of all pulpwood trucks can be classified as completely useless to the industry.

Pulpwood trucks and logging trucks in general are probably subjected to the most severe operating conditions of any trucks in general industrial use, since they are engaged in off-the-highway hauling of a bulky raw material. The depreciation of such equipment is necessarily high and is comparable on a large scale only to the depreciation which takes place in Army trucks.

Probably as significant as trucks is the tire situation. Every effort is being made to provide tires for new trucks scheduled in the first and second quarter. Truck operators must be cautioned that replacement tires will continue on a greatly restricted basis for the next few months at least. We ask that the pulp and paper industry place truck tire conservation on a "must program" for all their truck operators, otherwise, they may likely find their trucks completely disabled for lack of tires alone.

A few words about the gasoline situation. Critical developments in petroleum transportation have placed East Coast civilian petroleum supplies in a precarious position. The tank car problem is a serious one. The huge volume of other railroad traffic is making it difficult to keep up with the strenuous pace called for in the petroleum supply problem. The currently available supply of tank truck equipment is not adequate to meet fully the demand for the movement of petroleum products, particularly in the distribution from East Coast supply terminals to local storage points. The shortage of tank truck facilities has in large measure been responsible for brief local shortages in the South and Southeast. Indications are that the gasoline supply in the East Coast will be in a critical position for the next 90 days at least.

The minimum requirements for loading paper, paperboard and paper products in ODT 18A-1 are practically the same as those contained in Special Direction No. 5. The loading for each commodity has been shown specifically and provision has been made for loading of pool, club or mixed carloads. The industry in most cases has been able to load in accordance with these requirements and there have been very few special permits issued. Each request for a special permit forwarded to O.D.T. is referred to the Paper Division for their recommendations and I want to say that these requests are carefully screened and full justification must be shown before the special permit is granted.

ODT 18A, which is a revision of ODT 18-Revised, contains some important changes. I will mention a few of those. It places the responsibility for complying with the order with the shipper as well as the railroad. In the original multiple carload rule, it was permissible to load not to exceed three minimum consignments in a single car when originating at not more than three points of origin, and also permitted movement to not more than three consignees at not to exceed three destinations. The new rule retains the latter privilege, but confines the loading or outbound to not more than three consignors at the same point of origin. The order also states that there should be provided a specific tariff rule or rules governing restowing or rebracing of carload freight remaining in a freight car at a destination intermediate to the final destination of a freight car when such carload freight is transported subject to consolidation privileges found in Section 500.78 of the order, and such restowing or rebracing is necessary because of the removal of other carload freight from such freight car at such intermediate destination. The confining of the multiple loading provision to one origin and the stowing and bracing provision are now before the Interstate Commerce Commission in I. & S. Docket No. 5268, Rule 33—Multiple Loading. Oral argument has been held and the matter is before the Commission for its decision.

In closing, let me remind you that transportation conservation is absolutely necessary.

Linweave Merchants Meet

The fifteenth annual convention meeting of the Linweave Merchants' Association was held in New York at the Waldorf-Astoria Hotel on February 12. A representative group of Linweave distributors attended. The Executive Committee meeting was followed by the general membership meeting at which problems of mutual interest to mill and merchants were thoroughly discussed. An advisory group was appointed to confer with mill officials for the purpose of outlining a streamlined program of operation for the immediate future. Victor Hecht of the Zellerbach Paper Company having concluded his incumbency as President was chosen to chairman the advisory group, other members of which are as follows: H. K. Weed, Alling & Cory Company, New York, J. D. Bligh, Barton, Duer & Koch Paper Company, Washington, D. C., T. C. Price, Barton, Duer & Koch Paper Company, Baltimore, Md., W. T. Black, Allan & Gray, New York, J. D. Williams, D. L. Ward Company, Philadelphia, Pa., H. G. Boyer, Caskie Paper Company, Charlotte, N. C., E. L. Walters, Western Paper Company, Omaha, Neb., W. N. Gillett, Chicago Paper Company, Chicago, Philip Richardson, Storrs & Bement Company, Boston, Mass.

Following the general membership meeting the distributors were entertained at luncheon by P. P. Kellogg & Co. Division, United States Envelope Company after which promotion and advertising plans for the Linweave lines were presented by Linweave Manager T. H. Chambers, General Manager E. V. Johnson of the United States Envelope Company and E. L. Wight, advertising manager.

The meeting concluded with a roast beef dinner at the Toots Shor Restaurant.

Government Paper Awards

WASHINGTON, D. C., February 16, 1944—Walker Goulard Plehn Company, Inc., has been awarded the contract for furnishing the Government Printing Office with 45,144 pounds of white rag offset paper at 1.275 cents. Other paper awards recently announced include the following.

Marquette Paper Corporation will furnish 30,300 pounds of M.F. book paper at 7.42 cents and the Mudge Paper Company will furnish 129,300 pounds of white index paper at 15.4 cents. R. P. Andrews Paper Company will furnish 133,100 pounds of Tufwite tag paper at 9.6 cents and D. L. Ward Company will furnish 800,000 pounds of newsprint paper at $58.50 per ton.

D. L. Ward Company will also furnish 200,000 pounds of newsprint paper at $58.50 per ton and Paper Corp. of U. S. will furnish 115,100 pounds of tan bristol board at 9.9 cents. The Northwest Paper Company will furnish 150,000 pounds of cream post card paper at 6.57 cents and Columbian Paper Company will furnish 100,000 pounds of same at 6.5 cents.

Stanford Paper Company will furnish 52,000 pounds of white offset paper at 7.56 cents and Paper Corp. of U. S. will furnish 6,030 pounds of rag white writing paper at 23.8 cents. R. P. Andrews Paper Company will furnish 84,640 pounds of Riegels Tufwhite tag at 9.5 cents and the Virginia Paper Company will furnish 67,900 pounds of white rag index paper at 12.5 cents.

Paper Corporation of U. S. will furnish 19,200 pounds of white rag parchment paper at 22.23 cents and Columbian Paper Company will furnish 115,540 pounds of cream post card at 6.5 cents.

R. P. Andrews Paper Company will furnish 155,000 pounds of white C. W. mimeograph paper at 6.88 cents and Mead Sales Company will furnish 40,000 pounds of white poster paper at 7.32 cents. Northwest Paper Company will furnish 69,432 pounds of same at 6.84 cents and Stanford Paper Company will furnish 5,104 pounds of offset paper at 12.4 cents.

Book Paper Output Declines

Production of uncoated book paper in 1943 amount to 1,487,000 tons, a drop of 4% from 1942 and a 15% drop from 1941. Production was at an even rate during the first half of the year, fell off during July, then increased for the last five months at an even rate several points lower than at the beginning of the year. Shipments of Uncoated Book Paper in 1943 amounted to 1,490,000 tons, also 4% below 1942.

Coated book paper production in 1943 amounted to 225,000 tons, an increase of 9% over 1942, but a decrease of 26% from 1941. Shipments of 230,000 tons were also 9% above 1942 shipments.

Acquires St. Basile Mill

The physical assets of the St. Basile Paper Company, Inc., St. Basile, Quebec, have been acquired by Building Products, Ltd. The machinery and equipment will be dismantled and used at the Pont Rouge and Winnipeg paper mills of Building Products, Ltd.

We're in it for the duration

SINCE 1828

Continuously—We Have Served The Paper Industry.

Since War II was declared
We have used all our manufacturing
Facilities to help, in a small way, build a war machine second to none in the world.

At the same time
We have been thinking and planning for peace-time
Requirements with Improvements,
so now as our facilities are being released we are able to offer

THE SAME HIGH CLASS MACHINERY WITH IMPROVEMENTS

APPROVED ORDERS PLACED NOW WILL MAKE FOR EARLY DELIVERY

THE SMITH & WINCHESTER MANUFACTURING COMPANY

PLANT AND OFFICES AT SOUTH WINDHAM, CONNECTICUT

American Pulpwood Association

The annual meeting of the American Pulpwood Association was held on Wednesday, February 16 at the Waldorf-Astoria Hotel, New York. The following were elected to the board of directors:

Northeastern Region: H. G. Schanche, Brown Company; Frank G. Knights, New York and Pennsylvania Company; W. E. Becraft, International Paper Company; C. M. Hutchins, Dead River Company.

Appalachian Region: T. W. Fernold, Mead Corporation; Wm. D. Comings, West Virginia Pulp and Paper Company, Paul Koenig, Glatfelter Pulp Wood Company; W. T. Brust, Hammermill Paper Company.

Southern Region: C. O. Brown, International Paper Company; C. E. Smith, Champion Paper and Fibre Company; E. C. Wall, Canal Wood Corporation, E. J. Gayner, Brunswick Pulp and Paper Company.

Lake States Region: Charles H. Sage, Kimberly-Clark Corporation; A. B. Hansen, Northern Paper Mills; J. M. Conway, Hoberg Paper Mills, Inc.; Frank A. Kelly, Northwest Paper Company.

At Large: J. O. Lynch, Eastern Corporation; Albert Ernest, Union Bag and Paper Corporation; W. J. Bailey, West Virginia Pulp and Paper Company; E. A. Sterling, Johns-Manville Products Corporation of Virginia; H. V. Hart, St. Regis Paper Company; Louis J. Freedman, Penobscot Purchasing Company; R. R. Drummond, Oxford Paper Company; W. L. Cobb, Eastern Pulp Wood Company; Karl A. Swenning, Hollingsworth & Whitney Company.

At the meeting of the board of directors held on Thursday, February 17, at the Waldorf-Astoria the following officers were elected: President, T. W. Fernold, Mead Corporation; 1st vice-president, C. O. Brown, International Paper Company, Southern Kraft Division; 2nd vice-president, A. B. Hansen, Northern Paper Mills; 3rd vice-president, William D. Comings, West Virginia Pulp and Paper Company; secretary-treasurer H. E. Brinckerhoff, 220 East 42nd street, New York.

Paper Club of New York Dinner

The Paper Club of New York held its annual dinner on Wednesday evening, February 16, in the grand ballroom of the Waldorf-Astoria Hotel, New York. Reservations for the event totaled 750.

Mickey Alpert was master of ceremonies and Meyer Davis and his orchestra furnished the music. Professionals provided the eight acts of entertainment. Included on the program were such Broadway stars as Dynamite Jefferson, Jack Durante, Luis Gomez and Beatrice, the Norton Sisters, John Hoysradt, and Joan Edwards the singing star of "Your All Time Hit Parade."

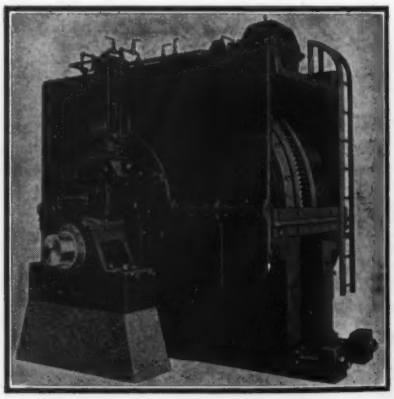
Additional dancing and entertainment was provided after the dinner in the Sert Room of the Waldorf-Astoria Hotel.

Boston Paper Trade to Meet March 15

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., February 14, 1944—The annual meeting and dinner of the Boston Paper Trade Association is to be held March 15 at the Algonquin Club.

In daily operation the Roberts Grinder is demonstrating that high speed grinding is a more profitable way to manufacture groundwood pulp. Because of its large capacity it replaces 3 or 4 pocket grinders. Because of its efficiency and savings in time, power and labor it reduces the cost per ton of pulp. Yet it takes little more space than a single 3 pocket grinder, requires no greater headroom, no auxiliary equipment. There is less waste, quality is improved. We will gladly give you full details of the performance features of the Roberts Grinder.



REPLACES 3 or 4 Pocket Grinders

ROBERTS Continuous GRINDER

If you are planning to increase or replace your groundwood equipment in the post-war period you should have all of the facts about the Roberts Grinder. Our engineers are ready to co-operate with you NOW in preparing plans to insure quick delivery when war-time restrictions are lifted.

Eastern Sales Representatives,
CASTLE & OVERTON, INC.
630 Fifth Avenue, New York

THE APPLETON MACHINE COMPANY
APPLETON WISCONSIN

Glassine and Greaseproof Association

The Glassine and Greaseproof Manufacturers Association held its annual meeting on Wednesday, February 16, at the Waldorf-Astoria Hotel, New York, at which the following officers were elected: Chairman, Paul F. Moore, Westfield River Paper Company, Russell, Mass.

Executive Committee: Folke Becker, Rhinelander Paper Company, Rhinelander, Wis.; Paul E. Hogdon, Deerfield Glassine Company, Monroe Bridge, Mass.; Robert F. Nelson, Glassine Paper Company, West Conshohocken, Pa.; J. L. Riegel, Riegel Paper Corporation, New York; Arthur Schwab, Hamersley Manufacturing Company, Garfield, N. J.; and secretary-treasurer, Thomas J. Burke, 122 East 42nd street, New York.

Pulp and Paper Machinery Assn.

The Pulp and Paper Machinery Association met at the Hotel Commodore, New York, on Wednesday, February 16. Phillips Dennett, president of the association, presided. Allan Hyer, Chief of Machinery Construction and Distribution Section of the Paper and Paperboard Division, Forest Products Bureau, WPB, addressed the meeting. He emphasized the fact that although the WPB would grant permission to purchase necessary materials including carbon, steel, alloy steel, copper and aluminum for the manufacture of new pulp and papermaking equipment, this would not mean that this is "an open season" for pulp and paper machinery. On the contrary, Mr. Hyer warned that only essential machinery and equipment needed now to make paper and paper board for vital governmental and essential civilian needs, would be permitted.

The details of the plan which will permit pulp and paper machinery concerns to purchase necessary materials for the manufacture of new machinery will be published within a week. Meanwhile the pulp and paper mills will be permitted to apply to the Paper and Paperboard Division for essential machinery and equipment. These requests will be analized by the Pulp and Paper Division and the mills will be permitted to purchase a certain amount of new machinery.

John Cornell is secretary of the association.

Waxed Paper Institute

The Waxed Paper Institute held its annual meeting on Wednesday, February 16, at the Waldorf-Astoria Hotel, New York, at which the following officers were elected: President, V. H. Wilshire, Specialty Papers Company, Dayton, Ohio.

Executive Committee Members: A. Southon, Kalamazoo Vegetable Parchment Company, Parchment, Mich.; Edgar Berkley, Waxide Paper Company, Kansas City, Mo.; and V. H. Wilshire, Specialty Papers Company, Dayton, Ohio.

Serving with President Wilshire next year will be Karl L. Zimmer, Zimmer Products, Inc., Indianapolis, Ind.; George P. Lamb, reelected counsel; Richard M. McClure, reelected secretary-treasurer, 111 West Washington street, Chicago, Ill.; and L. S. Baker, reelected assistant to Mr. McClure.

Allocating Pulp for Third Quarter

The policy of the War Production Board in allocating the available pulp to mills for producing specified quantities and types of paper and paperboard during the first quarter of 1944 was outlined last week by Harold Boeschenstein, acting director of the War Production Board Forest Products Bureau.

"The work of the Pulp Allocation Office in carrying out the program determination of the WPB Requirements Committee, with the aid of the Wood Pulp Allocation Industry Advisory Committee, has been completed for the first quarter of 1944," he said, "and specific allocations to all mills have been made with the understanding that, with the pulp so allotted, each mill is expected to produce the maximum paper or paperboard possible, by the use of as much waste paper and other materials as practicable in making specified paper products.

"In order that the burden of fulfilling the wood pulp requirements of Army ordnance and of meeting foreign needs might be equitably spread between integrated mills capable of complete operations from pulpwood to finished product, and non-integrated mills, those without pulp-making equipment, it was necessary to divert some of the pulp made by the integrated mills.

"While effort has been made to avoid diversion in amounts which might destroy incentive for a maximum production of pulp by integrated mills, part of their pulp production has been allocated to non-integrated and partially integrated mills to assure production of essential papers which could not be produced by other mills, or to balance and insure full utilization of other kinds of pulp produced by partially integrated mills and the waste paper reclamation equipment of other mills or to afford minimum operating rates in non-integrated mills in so far as this is possible without jeopardizing production of necessary quantities of essential paper and paperboard."

Mr. Boeschenstein explained that after the Requirements Committee had determined how the total supply of wood pulp for the first quarter of 1944 was to be divided among some 17 segments of the paper and paperboard industry, WPB was faced with the necessity of establishing standards for making specific allotments of pulp to each of the mills. These standards were worked out with the assistance of the Wood Pulp Allocation Industry Advisory Committee prior to the beginning of this year.

The standards used were summarized as follows:

1. Paper and paperboard mills producing no wood pulp, or mills using no waste paper or other supplementary fibrous material, were allocated sufficient wood pulp for the production of essential papers which could not be produced by other mills. Some of these mills produce types of paper and paperboard which could not otherwise be made in sufficient quantities to meet war and essential civilian needs.

2. Partially integrated mills were allocated sufficient market wood pulp to enable them to balance and utilize in full their own production of other types of pulp after diversion by WPB of a portion of their own pulp for allocation to non-integrated mills. The reasons for allocating wood pulp to partially integrated mills were that such mills do not produce enough pulp of the several kinds required to maintain practicable minimum operating rates on their paper and paperboard machines. The manufacture of most types of paper requires the blending of several different types of pulp, only one of which is, as a rule, made by a partially integrated mill.

3. Paper and paperboard mills having waste paper or rag conversion plants were allocated sufficient market wood pulp to enable them to utilize the maximum capacity of their waste paper or rag processing equipment. It is obvious in a time of shortage that by using waste paper and other supplementary fibres to the fullest extent the greatest amount of paper is produced with a minimum usage of critical virgin wood pulp.

4. Wood pulp was diverted from wholly integrated and semi-integrated mills to non-integrated mills in sufficient quantities to afford the latter at least a minimum rate of operation to the extent that this was possible without jeopardizing the operations of the mills from which the pulp was diverted or the production of necessary quantities of essential types of paper and paperboard. These diversions of

The use of worm gear speed reduction in Reading Electric Hoists is the reason why there are only four moving parts. This means fewer wearing parts, both gears and bearings and a simpler more compact design. The result is a minimum of maintenance that can be handled by the average mechanic.

It will pay you to investigate the money saving features of Reading Electric Hoists. For full technical information write for Bulletin 1004.

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pulp from integrated mills provide an equitable spread of the wartime burden of filling Army and foreign requirements as between integrated and non-integrated mills. They also preserve in operation, as going concerns, the maximum amount of productive facilities, and as far as practical prevent undue hardships to individual non-integrated mills and the communities in which they are located. Certain communities would, of course, suffer with the closing of mills for lack of pulp. It is the belief of the War Production Board that the war effort and the public interests are best served by maintaining the flow of paper and paperboard through their normal channels of distribution. Disruption of distribution by the closing of non-integrated mills in substantial number would involve almost insurmountable problems of rationing or other methods of obtaining even distribution of paper products.

The complete statement of policies followed in the allocation of pulp to each of the 17 segments is being sent to each of the pulp and paper mills affected. Single copies may be obtained by addressing the WPB Office of Pulp Allocation, Railroad Retirement Building, Washington, D. C.

Specification for Sacks

The issuance of a Federal Specification for paper shipping sacks, UU-S-48, is of particular importance because this represents the first comprehensive standardization of this form of container which is now used for shipping a great many commodities for which metal, wood, or textile containers were formerly used. This substitution has been accelerated under war conditions because of the necessity for conservation of these other more critical materials. The following information on the specification was prepared by B. W. Scribner, Chairman of the Federal Specifications committee for paper and paper products.

The requirements of the specification were prepared with the assistance of two committees of the Paper Shipping Sack Manufacturers Association: one an Advisory committee to the Containers Division of the War Production Board, and the other a technical committee of the industry. Assistance was also given by members of the Conservation Division and the Containers Division of the War Production Board.

Construction details are given for five types of sacks: Pasted open mouth, sewn open mouth, pasted valve, sewn valve, and sewn open corner. These may be made of from one to six plies of paper, as specified. Provision is made for the waterproofing of the ends of sewn sacks and the bottoms of pasted sacks, and also for the use of water-resistant adhesive, when a high degree of resistance to water is desired. No attempt was made to specify either the design or the capacity of sacks for given commodities, because the choice of design is dependent on such a complexity of use requirements; and the capacity must be varied to fit the particular product in question, as different products of even the same kind of material vary in bulk according to their physical condition.

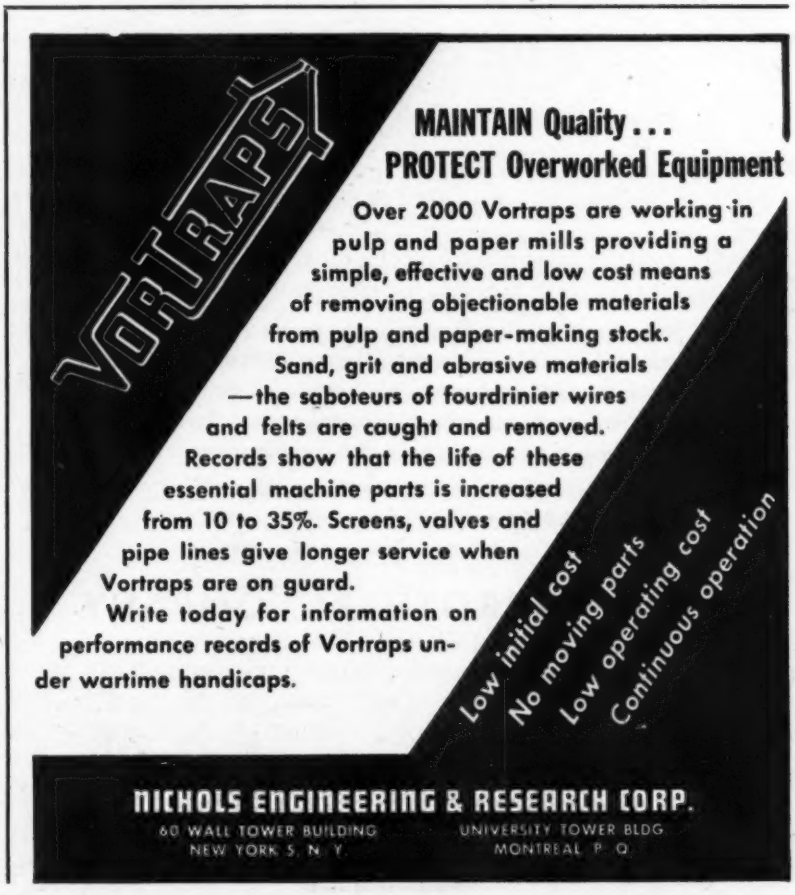
Four different kinds of paper are specified. These are plain shipping sack kraft paper and such paper treated for high wet strength, paraffined kraft paper and asphalted kraft paper. The detailed requirements for the first two comprise weight, bursting strength, tearing strength, tensile strength, air resistance, acidity, and stretch, and for the wet-strength paper a wet tensile strength of about 27.5 percent of that of the dry tensile strength. For these types of papers, a maximum limit is placed on air resistance to provide a degree of porosity that will permit satisfactory escape of air in the filling process; and a maximum limit of acidity is specified to minimize deterioration of the paper when the sacks are filled with hot materials.

Chain Belt Drives

"Wartime Care of Chain Belt Drives" is a booklet just published by the Chain Belt Company giving information on maintenance, lubrication and repair of chain belt drives during these wartime days.

Chain belt drives, as well as other equipment, are working longer hours at a harder pace than ever before. The booklet was produced with the idea of helping users to get the most out of their existing drives and save some costly delays and unnecessary expense. It may be obtained by writing Chain Belt Company, 1600 West Bruce Street, Milwaukee 4, Wis.

Chain Belt Company, in addition to making chain belts for drive purposes, manufactures over 2000 types of chain belts for both drive and conveyor service, numerous types of conveyors and other engineering products, and a complete line of construction machinery.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Over 2000 Vortraps are working in pulp and paper mills providing a simple, effective and low cost means of removing objectionable materials from pulp and paper-making stock. Sand, grit and abrasive materials —the saboteurs of fourdrinier wires and felts are caught and removed. Records show that the life of these essential machine parts is increased from 10 to 35%. Screens, valves and pipe lines give longer service when Vortraps are on guard.
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American Pioneers

First printing press brought from England to Cambridge, Mass. in 1638. Picture shows Matthew Day, Stephen Day, his father and an Indian called "James Printer." First American Book was printed on this press in 1640.

PAPER made printing possible because it provided the only practical substance to receive impressions from the printing press.

Not all papers are equally acceptable to printed impressions. This is largely dependent upon the design of the wet felts on a paper machine. For the felts themselves impress the web of paper during its most impressionable state. Calendering cannot eliminate the effects of pressing from felts improperly designed for the given purpose.

Your requirements can be well satisfied when you order felts designed and made by **DRAPER.**

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DRAPER BROTHERS COMPANY

Woolen Manufacturers Since 1856

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W. L. CAMPBELL, Savannah, Ga.
E. R. LELOFF, Vancouver, Wash.
CHAS. E. BERTSCHY, Milwaukee, Wis.

Selecting Coal for Steam Boiler Plants

A set of forms for collecting information to be used in the selecting of coal for steam boiler plants has just been issued by the National Association of Purchasing Agents, 11 Park Place, New York, N. Y. These include all of the items connected with the boiler plant which have bearing on this subject, arranged in a convenient manner, and are the result of an extensive study made by the Association's Coal Committee.

Most of the items covered have been used for selecting coal, but this is believed to be the first standard arrangement that can be used by the combustion engineer and the coal buyer, bringing them into complete understanding with each other and making it more possible for all boiler plants throughout the country to be surveyed for these characteristics—something that has been very badly needed in the past and has only been accomplished by the boiler plants of a comparatively few companies.

The buying of coal is an important matter. Most coal buyers so greatly lack information of this nature that they have little opportunity to select coals and are inclined to purchase what someone has recommended without a real combustion study, or use the trial and error method, which may be expensive or otherwise unsatisfactory.

Two of these forms contain the information that changes only when the equipment is changed and need therefore to be filled in only once for any particular equipment or layout. A third form covers information that should be collected periodically, at least once a year. The fourth form is the active one and should be filled in frequently, especially when changing coals.

Form V is a simplified manner of reporting a coal trial.

If the plant operator, the combustion engineer, the coal buyer, and the coal salesman all use these forms, they will have a better understanding of the conditions surrounding the boiler plant operation and the varieties of coal that can be used in it satisfactorily. It is possible, too, that if this becomes common practice, engineers in designing power plants will have available much better information on the size and type of loads carried, what fuel is available, etc.

These forms will be made available to anyone who cares to use them.

Alcohol War Demands Can Be Met by Waste Wood

Prospective shortages of grain for human consumption and livestock feeding, and continued dwindling of the nation's industrial alcohol reserves can be avoided by utilizing sawdust and other wood wastes available at hundreds of sawmills throughout the United States according to Wilson Compton, executive officer of the National Lumber Manufacturers Association.

"From sawdust piles which accumulate unused at sawmills, and from wastes flowing from pulp mills, it is readily possible to produce enough alcohol to take up the slack at a cost less than half the average price which the government is now paying for exactly the same kind of alcohol," he said.

"Shortage of alcohol has been headlined to the nation as meaning there will be none available for beverages in 1944. It is more serious than that. Alcohol is vital to our synthetic rubber production. It is a necessary raw material for war munitions. We are told not only that our reserves have dropped 42 per cent in six months, but also that our expected 1944 production will not keep pace with the expected consumption during the current year.

"Those who wonder how Germany has been able to maintain her large synthetic rubber program, based upon alcohol, and also how she manages to produce sufficient feed, will find the answer to a large degree in her wood-sugar industry, from which both alcohol and protein feeds are made," Mr. Compton said.

"This is nothing new in either Germany or Japan.

"It should not be new here."

The same processes have been available in the United States for several years, according to Mr. Compton, who is also president of the Timber Engineering Company, an engineering and research subsidiary of the National Lumber Manufacturers Association. Pilot plant tests, concluded last year by the United States Forest Service for the War Production Board, not only have proven the great productivity of these processes, but have developed improvements.

Sawmill and pulpmill wastes already conveniently available and not now otherwise utilized, can be turned into the production of more than 150 million gallons of alcohol a year, he continued, or more than a fourth of the 1944 requirements.

Mac had been machine tender
since Hector was a pup.
He knew war calls for paper . . . tried to keep production up.
For speed in changing wires, Mac had them all outclassed.
His crew was trained to snap it up . . . off old, on new, and *fast!*
One day, with a new crew handling wire with many a tug and jerk,
Mac put the pressure on so hard he was wrapped up in his work!
Green men need time to *learn* and time to *practice,*
Mac has found.
The wire change is *slower,* but it's *better* all around.

That new wire is a great big piece of valuable equipment. Your crews of new men will be well advised to handle it with special care. When they do, your Cheney Bigelow wires will deliver all the fine service you've come to expect of them . . . for we're keeping our skilled wire craftsmen on the job, giving you their best, as always.

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PAPER
TRADE JOURNAL
Title Reg. U. S. Pat. Off.
Henry J. Berger
EDITOR

Vol. 118 February 17, 1944 No. 7

THE YEAR IN PAPER

The over all production of paper reached a high volume in 1943. The total output is estimated at 17,035,000 tons, or 4% below the all time record of 1941. In 1943, paper board production increased about 800,000 tons over 1942, while the production of all grades of paper declined almost 700,000 tons. Some changes in figuring production have occurred. The Census Bureau has included in the revised figures of 1941 and 1942, some 400,000 tons of building paper and paper board, produced in 24 mills, not previously classified as manufacturing paper and paper board. Allowance for this production, not formerly included in production figures, is made in the 1943 estimate.

Newsprint production in North America in 1943 aggregated 4,024,000 tons; a decrease of 8.7% or 383,000 tons from 1942. Of this total Canada supplied 2,983,000 tons or 74%, the United States, 805,000 tons or 20%, and Newfoundland, 236,000 tons or 6%. Canadian output was the smallest since 1939, while the United States manufactured less newsprint in 1943 than in any year in the past 40 years. Newfoundland production in 1943 was the lowest since 1920. The North American newsprint industry operated at 68.5% of an estimated capacity of 5,872,000 tons. Canadian exports totaled 2,810,000 tons, of which 2,535,000 tons were shipped to the United States. Exports from the United States totaled 15,000 tons, compared with 18,000 tons in 1942. Newsprint inventories at mills at the close of the year totaled 116,000 tons; publishers' stocks, 367,000 tons; a total of 483,000 tons, compared with 647,000 tons at the same date in 1942. Publishers' stocks were equal to 52 days' supply at the current rate of consumption. Consumption of newsprint for 1943 was 2,720,000 tons, a decrease of 115,000 tons or 4% from 1942, and 7.7% under the consumption of 1941, when the 10% reduction in use of newsprint order of the WPB became effective. Per capita consumption was 53½ pounds, or less than the 1936 per capita rate which was close to 57 pounds.

Kraft paper production in 1943 declined 10.9% below 1942, after four years of increasing production. Shipments, geared closely to output by reason of the low inventory position of the industry, also declined and were 6.5% under 1942. Total new orders were 4.9% less than in 1942. Kraft mills operated at an average of 75% of capacity. War requirements reduced the production of wrapping paper for civilian use, and increased the output of converting grades, such as asphalting, gumming, envelope, twisting, impregnating and saturating grades for conversion to war uses. The $5 per ton price roll back in July was rescinded April 1, 1943 by the OPA, since which date no change in prices have occurred. Due to a wider recognition of the essentiality of kraft paper to the war effort and for civilian use, it is expected in this division of the paper industry that a minimum increase of about 100,000 tons may be permitted by the WPB for 1944.

Book paper production, uncoated grades, aggregated 1,620,000 tons in 1943, against a capacity of 1,850,000 tons. This compares with a production of 1,716,029 tons, against a capacity of 1,885,000 tons in 1942. In the record year of 1941, the total production of uncoated book paper was 2,025,891 tons, against a capacity of 2,045,000 tons. Pulp allocations for the first 1944 quarter, according to the Department of Commerce, are estimated to permit a minimum monthly production of 114,732 tons of book papers, and 44,784 tons of groundwood papers. These amounts represent a reduction of 13.3% for book papers, and 7.5% for groundwood papers under amounts produced in the third 1943 quarter.

Writing paper production in 1943 was 805,000 tons, compared with 853,463 tons in 1942, which was a record year. Shipments were in excess of the year's production, resulting in the lowest mill inventory position since 1920. War demands for writing paper continued high. Shipments of rag content papers direct to the government and its agencies were 53% of the total production, compared with 50% in 1942, while 21% of the 1943 tonnage of the sulphite writing grades were shipped to the government and its agencies, compared with 19% in 1942. About 75% of all fine papers are currently being used by the government and in the war effort.

Paper board production in 1943 aggregated an estimated 7,800,000 tons, an increase of 6% over 1942, and 3.5% below the record high of 7,857,500 tons in 1941. The increased proportion of container board reflects the heavy military demand for boxes in which to package and ship military supplies. Productive activity throughout the year reached a new all time high average of 93%. The year opened with a good volume of orders and increased to a peak in July and continued high for the remainder of the year. The rate of output was made possible by the strong demand for paper board throughout the year, thus permitting fairly steady hours of operation and economical scheduling of orders and mill efficiency. Prices were unchanged except for an advance of from $1.50 to $3 per ton on some grades of container and paper boards.

United States wood pulp production in 1943 totaled

an estimated 9,050,000 tons, compared with 10,227,720 tons for 1942, or a decrease of 8.8%. Of this production, bleached sulphite totaled 1,558,000 tons; unbleached sulphite, 887,000 tons; bleached sulphate, 746,000 tons; unbleached sulphate, 3,510,000 tons; soda, 419,000 tons; semi-chemical, 233,000 tons; total chemical pulp, 7,367,000 tons; total mechanical pulp, 1,680,000 tons. Canadian wood pulp production was estimated at 1,280,000 tons, compared with about 600,000 tons annually in pre-war years. Shipments for the first six months of 1944 are indicated at the annual rate of 1,100,000 tons, or 91,666 tons monthly.

The wood pulp supply situation for 1944 appears critical, because of the unpredictable pulpwood supply. Any forecast of 1944 pulpwood receipts, states the Department of Commerce, is subject to variable conditions and even a projection for the first 1944 quarter is highly vulnerable. However, it indicates the possibility of an obstruction to the war program itself, while the civilian needs may have to be cut to such an extent as seriously to disrupt the civilian economy.

Seek to Enjoin Brownville Co.

BROWNVILLE, N. Y., February 14, 1944—An injunction was brought this week by the directors of the old Brownville Paper Company against Lieut. Henry Wise and his recently incorporated Brownville Paper Company. The charter of the original Brownville Paper Company expired in 1943 after a duration of fifty years and the injunction was brought in order to restrain Lieut. Wise and his company from using the name, Brownville Paper Company on the ground that it will obstruct the plaintiff in the conduct of its business.

Production Ratio Report*

(Production as per cent of six-day capacity)

COMPARATIVE WEEKLY SUMMARIES

Current Weeks—1944		Corresponding Weeks—1943	
January 1	72.1	January 2	75.9
January 8	91.7	January 9	85.7
January 15	91.2	January 16	88.1
January 22	89.2	January 23	87.9
January 29	89.2	January 30	87.1
February 5	*90.9*	February 6	87.2

COMPARATIVE MONTHLY SUMMARIES

Year	Jan.	Feb.	Mar.	Apr.	May	June	July
1943	87.2	88.9	89.5	88.7	91.4	84.8	84.3
1944	*90.1*	..	..	..	..	..	..

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1943	91.0	88.3	89.6	89.6	82.2	87.8

COMPARATIVE YEARLY SUMMARIES

	1937	1938	1939	1940	1941	1942	1943	1944
Year to Date	89.0	63.9	76.7	89.1	86.1	104.3	87.2	*90.1*
Year Average	79.8	71.5	83.4	85.6	97.4	90.4	87.8	...

* Based on tonnage reported to American Paper and Pulp Association. Does not include mills reporting to National Paperboard Association, except in isolated cases where both paper and paperboard are produced and separate tonnage figures are not readily available. Does not include mills producing newsprint exclusively.

PAPERBOARD OPERATING RATIOS†

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1938	56	63	63	60	60	59	59	69	70	73	67	61	64
1939	65	73	76	74	69	73	68	77	82	91	88	77	77
1940	78	75	74	76	82	85	77	79	78	85	82	77	78
1941	81	88	89	89	91	94	92	98	95	99	98	90	92
1942	102	101	101	95	82	72	68	75	76	81	82	77	84
1943	86	88	94	94	96	94	89	96	94	94	93	87	93
1944	*90*	..	..	..	..	..	..	..	..	..	..	..	..

Week ending Jan. 1, 1944—63
Week ending Jan. 8, 1944—86
Week ending Jan. 15, 1944—93
Week ending Jan. 22, 1944—93
Week ending Jan. 29, 1944—95
Week ending Feb. 5, 1944—97

† Per cents of operation based on "Inch-Hours" reported to the National Paperboard Assn.

TO MEET CRITICAL "SPECS", SPECIFY . . .

WITCO BLACK NO. 11

Because it disperses readily and evenly, imparting deep, rich, uniform color to paper and cardboard, Witco Black No. 11 is economical to use. Likewise, its dustless pellet form makes Witco Black No. 11 cleaner to handle than uncompressed blacks, and may be placed in the beater without removal from the bag. A sample test will verify for you the superior properties of Witco Black No. 11.

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Boston, Chicago, Cleveland, London
Witco Affiliates: Pioneer Asphalt Company
Panhandle Carbon Company

Joins Bulkley, Dunton Pulp Co.

The appointment of Paul C. Staake as Western sales representative of Bulkley, Dunton Pulp company, Inc., has been announced by Fred Enders, president of the company. Mr. Staake will cover the territory from his headquarters in the Chicago office of Bulkley, Dunton, at 80 East Jackson Boulevard.

Paul Staake is no newcomer to the pulp and paper industry. As partner in the Staake-Schoonmaker Advertising Agency in Kalamazoo, Mich. for eleven years, he has handled the advertising accounts or promotion work for a number of paper companies, among them the Kalamazoo Vegetable Parchment

PAUL C. STAAKE

Company, the Sutherland Paper Company, the Allied Paper Mills, the Rex Paper Company and the Bryant Paper Company. Working for and with these concerns he has not only become familiar with many of the problems in the production and merchandising of paper, but has also made a great many friends in the industry.

Before establishing his own advertising agency, he was advertising manager for the De Forest Radio Company, Passaic, N. J., and prior to that the National Radio Corporation of New York.

Born in Grand Rapids, Mich., Mr. Staake was educated in Kalamazoo where he graduated from Kalamazoo College in 1921. He also did some post graduate work at the University of Chicago.

He is married and has two sons, one in the Army Air Corps and the other in the Navy.

Urge Draft Deferment for Loggers

George R. Wallace, president of the Association of Pulp Consumers, Inc., Washington, D. C., presented a strong statement last week in support of H. R. 4000 before a subcommittee of the House Committee on Military Affairs of which Congressman Overton Brooks of Louisiana is chairman. Congressman Philip J. Philbin of Massachusetts introduced H. R. 4000 on January 18, 1944, which is for the purpose of giving those engaged in timber or pulpwood logging operations the same draft deferment status as farmers receive.

The statement made by Mr. Wallace, who is president of the Fitchburg Paper Company, Fitchburg, Mass., which has a New York City office at 250 Park avenue, follows in part:—

"The members of the Association of Pulp Consumers, Inc. operate 260 paper and paper board mills which have an annual capacity of 5,000,000 tons of paper and paper board. They represent approximately 30 percent of the total paper and paper board capacity of the United States and use not less than 20 percent of the total wood pulp consumed in the production of paper and paper board. In addition, they consume large tonages of waste paper, rags, and other fibrous materials and fillers.

"These 260 mills are located in 166 communities in 26 states and the District of Columbia. Over one-half of them are located in communities of less than 15,000 population and approximately one-fourth are in communities of less than 2,500 population. The manufacture of paper and paper board is the only industry in many of these communities and if the mills were closed, the communities would be destitute.

"4,000 additional men in the woods in the Pacific Northwest will produce sufficient additional pulpwood to reopen the pulp mills which are closed and to increase the production of those which are now operating. In addition, these men will produce a large quantity of saw logs which are also urgently needed. We are asking your help in making these men available so that we can produce the paper and paperboard needed in the war effort and prevent a breakdown in the future supply of paper and paperboard.

"We have now reached the absolute limit of our ability to further help ourselves and I urge in behalf of the 260 mills which I represent that favorable consideration be given to H. R. 4000."

Import Committee Twenty Years Old

This year marks the twentieth birthday of the Import Committee of the American Paper Industry. It was at the annual convention of the American Paper and Pulp Association in 1924 that the first steps toward the formation of the Import Committee were taken, under the inspiration of the Salesmen's Association of the Paper Industry. Active work began at once, and before the end of the year the committee was functioning successfully as a separate organization of the paper industry, with its sole purpose the prevention of unfair foreign competition.

While the committee was formed to secure the enforcement of existing tariff laws by cooperation with Government officials, the information and experience gained in its operations formed the essential basis upon which the industry could proceed through appropriate committees to secure legislative changes when necessary. It was because of this experience that the Industry was able to present its case to Congress in 1930 in such a way that many changes were effected in the Tariff Act.

During the twenty years of its existence the Import Committee has recorded 10,691 separate cases, in which it represented the domestic industry either before Customs officials or in the United States Customs Courts. The committee has never varied from its original policy of providing "Facts and Facts Only" to appraising officers of the Bureau of Customs, to the Department of Justice for trial of cases in the United States Customs Courts, to he Treasury Department and the United States Tariff Commission.